THE NATIONAL INSTITUTES OF HEALTH

A RESOURCE GUIDE

THE AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

March 1996

THE NATIONAL INSTITUTES OF HEALTH

A RESOURCE GUIDE

THE AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

2450 N St. NW
Washington, DC 20037
phone: 202-828-0525
fax: 202-828-1125
email: adhoc@aamc.org

March, 1996

TABLE OF CONTENTS

The Ad Hoc Group for Medical Research Funding Overview ii
NIH Overview iii
How the NIH Funds Scientific Excellence iv
NIH Funding v
How To Learn More About the NIH vi
National Cancer Institute 2
National Eye Institute 4
National Heart, Lung, and Blood Institute 6
National Institute of Allergy and Infectious Diseases 8
National Institute of Arthritis and Musculoskeletal and Skin Diseases 10
National Institute of Child Health and Human Development 12
National Institute of Dental Research 14
National Institute of Diabetes and Digestive and Kidney Diseases 16
National Institute of Environmental Health Sciences 18
National Institute of General Medical Sciences 20
National Institute of Mental Health 22
National Institute of Neurological Disorders and Stroke 24
National Institute of Nursing Research 26
National Institute on Aging 28
National Institute on Alcohol Abuse and Alcoholism 30
National Institute on Deafness and Other Communication Disorders 32
National Institute on Drug Abuse 34
National Library of Medicine 36
Fogarty International Center 38
National Center for Human Genome Research 40
National Center for Research Resources 42
Warren G. Magnuson Clinical Center 44
Office of AIDS Research 46
Office of the Director of NIH
- Office of Alternative Medicine 48
- Office of Behavioral and Social Sciences Research 49
- Office of Disease Prevention 50
- Office of Research on Minority Health 52
- Office of Research on Women's Health 54

A Glossary of NIH Terms 56
The Ad Hoc Group Membership 58

THE AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

Since its inception in 1982, the Ad Hoc Group for Medical Research Funding has pursued one goal: to increase the federal investment in biomedical and behavioral research by increasing the appropriations for the National Institutes of Health (NIH). Each year, the Ad Hoc Group holds extensive meetings with the leadership of the NIH and its constituent institutes and centers. The Ad Hoc Group uses the information collected in these meetings to develop a proposed NIH budget that reflects the scientific opportunities currently available as well as the health needs that face the nation.

The underlying principle of the Ad Hoc Group always has been, and continues to be, that the whole of the nation's medical research effort is greater than the sum of its individual parts. As a result, the Ad Hoc Group proposal represents a bottom line recommendation for the NIH as a whole rather than an articulation of individual requests for specific institutes, programs or diseases.

Year-round, the Ad Hoc Group for Medical Research Funding sponsors a variety of educational activities aimed at informing policy makers of the NIH's value to the nation. A number of other activities are held each year to strengthen the individual advocacy efforts of Ad Hoc Group members.

The membership of the Ad Hoc Group represents the diverse nature not only of the research community but also of the patients who are the ultimate recipients of the benefits of medical research.

AN OVERVIEW

The mission of the National Institutes of Health (NIH) is to discover new knowledge that will lead to better health for everyone. The NIH is the world's leading biomedical research institution, supporting more than 50,000 scientists at more than 1,700 research universities, academic medical centers, and institutions throughout the United States. It is comprised of 24 distinct institutes, centers, and divisions and is headquartered in Bethesda, Maryland. The NIH is part of the Public Health Service, which in turn is part of the U.S. Department of Health and Human Services.

The NIH's goal is to supervise, fund, and conduct biomedical and behavioral research that produces new knowledge to help prevent, detect, diagnose, and treat disease and disability in humans, from the rarest genetic disorder to the common cold.

More than 81% of the NIH's budget is spent on extramural research conducted at universities, research institutions, and hospitals throughout the United States. Scientists from every state in the country compete for and receive research funding from the NIH. About 11% of the NIH's budget is spent on intramural research conducted at its Bethesda, Maryland campus in individual institute laboratories and in the 400-bed Warren G. Magnuson Clinical Center, a research hospital that comprises nearly half of the clinical research beds in use in the United States.

NIH-supported researchers have made the United States the world leader in biomedical and behavioral research, creating thousands of jobs and new businesses in the process. Eighty-eight NIH-supported scientists have won Nobel prizes, including the current Director of the NIH, Dr. Harold Varmus.

HOW THE NIH FUNDS SCIENTIFIC EXCELLENCE

Peer Review and the Grant Funding Process

NIH extramural research typically begins as an idea in the mind of a scientist. The idea might be for a new diagnostic test, or the examination of a fundamental biological process at the molecular level. The scientist describes the idea and a plan of research in a written application that is submitted to one of the NIH institutes. From there, the research grant application is subjected to rigorous review by other scientific researchers who are productive experts in the field. This competitive review ensures that only the most worthwhile research, performed by the finest scientists in the country, is funded. Peer review is the source of the NIH's accountability and excellence in federally-supported scientific research.

The initial review for scientific and technical merit usually is conducted by one of the chartered initial review groups (often termed "study sections") managed by the NIH Division of Research Grants. There are currently 102 peer review panels comprised of experts from around the country appointed by the Director of the NIH. Each application is studied individually, and study section members assign priority ratings consisting of their assessment of its merit.

A second level of review for grant applications is provided by the advisory council of the funding unit (institute, center, or division). The advisory council considers both the study section merit score and other critically important factors, including relevance, program goals, and available funds.

Many investigators view "success rate" as a key indicator of funding opportunity. The success rate equals the number of applications funded divided by the number of applications reviewed. The success rate varies by institute and is considerably lower for first time (unamended) grant applications.

NIH FUNDING

Throughout its history, the funding of the NIH has been a bipartisan issue, supported strongly by both parties, regardless of which party controlled the chair.

Authorization: In the House of Representatives, the National Institutes of Health is within the jurisdiction of the House Commerce Committee and its Subcommittee on Health and the Environment (Majority: 202-225-2927/2125 RHOB; Minority: 202-225-3641/2322 RHOB). In the Senate, the NIH falls within the purview of the Senate Labor and Human Resources Committee. Most NIH-related legislation is handled at the full committee level. The committee's Health Office provides staff support (Majority: 202-224-3191/SH-725; Minority: 202-224-7675/SH-527). Although some NIH programs need periodic reauthorization, the Public Health Service Act provides a general, standing authorization for most of the programs of the National Institute of Health.

Appropriations: Funding for the National Institutes of Health is contained in the annual Labor-Health and Human Services-Education and Related Agencies appropriations bill, developed by the House and Senate Labor-HHS-Education Appropriations Subcommittees (House Majority: 202-225-3508/2358 RHOB; Minority: 202-225-3481/1016 LHOB) (Senate Majority: 202-224-7230/SD-184; Minority: 202-224-7288/SH-123). The bill contains separate line item appropriations for each of the NIH institutes.

Budget: Funding for the National Institutes of Health is contained in Function 550 (Health) in the yearly Congressional budget resolution.

Appropriation History
($ in thousands)

FY 1993	$10,326,604 (+2.6%)
FY 1994	$10,937,653 (+5.9%)
FY 1995	$11,284,162 (+3.3%)
FY 1996	$11,939,001 (+5.8%)

Extramural Research Project Grants Supported

FY 1993	23,952
FY 1994	24,964
FY 1995 (Est.)	24,927

Success Rate - Research Project Grants

FY 1993	24.5%
FY 1994	25.0%
FY 1995 (Est.)	24.0%

Research Training
(# of FTE's supported)

FY 1993	14,291
FY 1994	14,706
FY 1995 (Est.)	14,741

Full-Time Equivalent Employees

FY 1995 (Est.)	16,197

Research Centers Supported

FY 1995 (Est.)	869

HOW TO LEARN MORE ABOUT THE NIH

There are a variety of resources available to answer questions about the National Institutes of Health. This Resource Guide lists the postal address, phone and fax numbers, and email address of the directors and legislative liaisons of each of the NIH's component institutes and offices. These individuals would be pleased to provide information about the programs and scientific missions of their organizations. Information about the NIH as a whole is available from the following individuals:

NATIONAL INSTITUTES OF HEALTH:
Dr. Harold Varmus. director
301-496-2433 (voice)
301-402-2700 (fax)
email: hv2b@nih.gov

Extramural Research
Dr. Wendy Baldwin, director
301-496-1096 (voice)
301-402-3469 (fax)
email: wb4c@nih.gov

Intramural Research
Dr. Michael Gottesman, director
301-496-1921 (voice)
301-402-4273 (fax)
email: mg12i@nih.gov

Office of Legislative Policy and Analysis
Ms. Diane Wax, director
301-496-3471 (voice)
301-496-0840 (fax)
email: dw20a@nih.gov

Office of Communication
Ms. Anne Thomas, director
301-496-4461 (voice)
301-496-0017 (fax)
email: at9m@nih.gov

Office of Science Policy
Dr. Lana Skirboll, director
301-496-2122(voice)
301-402-1759 (fax)
email: ls25d@nih.gov

AD HOC GROUP FOR MEDICAL RESEARCH FUNDING:
The Ad Hoc Group for Medical Research Funding, representing nearly 200 organizations interested in the NIH, has a host of resources available to congressional offices and the public. For example, the Ad Hoc Group can identify constituents and community-based organizations who can provide information on how the NIH impacts your state and congressional district. For more information:

Ad Hoc Group for Medical Research Funding
Mr. David B. Moore, executive secretary
202-828-0525 (voice)
202-828-1125 (fax)
email: dbmoore@aamc.org
or, email: adhoc@aamc.org

THE NIH ON THE WEB

The NIH and many of its constituent institutes, centers, divisions, and offices maintain home pages and/or gopher sites on the Internet. The main NIH home page can be accessed at **<http://www.nih.gov>**. The Ad Hoc Group for Medical Research Funding's home page provides easy access to the NIH home pages and gopher sites as well as to the Internet locations of its members. The Ad Hoc Group home page also contains a wealth of other information, including sound clips, photographs, and maps. The Ad Hoc Group's home page is located at **<http://www.aamc.org/research/adhocgp/>**.

NATIONAL CANCER INSTITUTE

Address:
National Institutes of Health
National Cancer Institute
Building 31, Room 11A48
9000 Rockville Pike
Bethesda, MD 20892

Director:
Richard Klausner, M.D.
301-496-5615 (voice)
301-402-0338 (fax)
email: klausner@helix.nih.gov

Legislative Liaison
Dorothy Tisevich
301-496-5217(voice)
301-402-1225 (fax)
email: tisevicd@od.nci.nih.gov

Mission:

NCI leads a national effort to reduce the burden of cancer morbidity and mortality, and ultimately to prevent the disease. Through basic and clinical biomedical and behavioral research and training, NCI conducts and supports programs to understand the causes of cancer; prevent, detect, diagnose, treat, and control cancer; and disseminate information to the practitioner, patient and public.

Selected Achievements and Initiatives:

Mutator genes in colon and other cancers: Colorectal cancer is one of the most common cancers diagnosed in the U.S. Hereditary non-polyposis colorectal cancer (HNPCC) is an inherited colorectal cancer that accounts for roughly 15 percent of all cases. Investigators have recently identified defects in four "mutator" genes (MSH2, MLH1, PMS1, and PMS2) that are responsible for more than 90 percent of HNPCC, and may account for about 30 percent of sporadic (non-inherited) cancers. These genes produce proteins that act as "proofreaders" to detect and repair mistakes in the DNA code that occur during replication. Studies of these genes and their functions may help researchers to understand the mechanisms by which many cancers develop, and may help identify individuals at risk for developing certain cancers.

Identification/characterization of the Von-Hippel Lindau (VHL) oncogene: Abnormalities of VHL occur in almost 85 percent of the families with VHL disease, which is characterized by renal cell carcinoma, kidney cysts and non-malignant tumors in the adrenal glands, and in nearly 60 percent of patients with sporadic clear cell kidney cancers. Researchers have recently elucidated the nature and function of the VHL oncogene in the development of kidney cancer, which will affect an estimated 28,800 people, with 11,700, deaths in 1995. In contrast to all previously described oncogenes, the VHL oncogene plays a novel role in regulating transcription elongation. This finding opens a new approach to studies of cell growth regulation in normal and malignant cells, and could lead to new ways to prevent and treat cancer.

NATIONAL CANCER INSTITUTE

Cloning of familial breast cancer genes for identifying women at increased risk: Breast cancer is the second leading cause of cancer death in women, and comprises about 30% of all female cancers with 182,000 new cases and 46,000 deaths estimated for 1995. A breast cancer susceptibility gene, BRCA1, recently identified on chromosome 17, is estimated to be a factor in about half of early-onset familial breast cancer. A second familial breast cancer gene, BRCA2, has been localized to chromosome 13. Normal BRCA1 and BRCA2 genes help to restrain tumor growth. Abnormalities in these two genes account for approximately two-thirds of all familial breast cancer, or roughly 5 percent of all breast cancer. The discovery and sequencing of these genes may help scientists to understand the origins of breast cancer, and make it possible to identify women at increased risk for developing familial breast cancer. Studies to learn if women with sporadic breast cancer have an acquired, rather than an inherited, mutation in one of these genes are underway.

Appropriation History
($ in thousands)

FY 1993	$1,981,351 (+1.0%)
FY 1994	$2,082,267 (+5.1%)
FY 1995	$2,135,119 (+2.5%)
FY 1996	$2,258,035 (+5.9%)

Extramural Research Project Grants Supported

FY 1993	3,122
FY 1994	3,226
FY 1995	3,172

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	46.3%
FY 1994	45.0%
FY 1995 (Est.)	44.4%

Success Rate - Research Project Grants

FY 1993	24.6%
FY 1994	21.7%
FY 1995 (Est.)	19.1%

Research Training
(# of FTE's supported)

FY 1993	1,446
FY 1994	1,463
FY 1995	1,467

Full-Time Equivalent Employees

FY 1995 (Est.)	2,304

Research Centers Supported

FY 1995	67

NATIONAL EYE INSTITUTE

Address:
National Eye Institute
National Institutes of Health
Building 31, Room 6A03
31 Center Drive MSC 2510
Bethesda, MD 20892-2510

Director:
Carl Kupfer, M.D.
301-496-2234 (voice)
301-496-9970 (fax)
email: cak@b31.nei.nih.gov

Legislative Liaison:
Michael P. Davis
301-496-4308 (voice)
301-402-3799 (fax)
email: mpd@b31.nei.nih.gov

Mission:

The National Eye Institute (NEI) conducts and supports research, training, health information dissemination, and other programs with respect to blinding eye diseases, visual disorders, mechanisms of visual function, preservation of sight, and the special health problems and requirements of the blind. More than 12 million people in the United States suffer from some significant, non-correctable, impairment of vision. To attain the goals of the Institute's mission, over 85% of the NEI's appropriated funds are used to support extramural research and research training at universities, medical schools, hospitals, and other institutions throughout the Unites States and abroad. The NEI also has established an internationally recognized team of scientists that conducts research in the NEI's laboratories and clinical facilities located on the NIH campus in Bethesda, Maryland.

Over the past 25 years, NEI-supported research has led to numerous discoveries that have saved countless people worldwide from vision loss or blindness. These accomplishments include conducting pioneering research on the use of laser treatment for a variety of eye diseases, and improving treatment for diseases, such as diabetic retinopathy, glaucoma, uveitis, eye disorders in premature infants, ocular herpes, and cytomegalovirus retinitis. In addition, NEI-supported research has advanced our knowledge of how the eye functions in health and disease. This vital information will lead to future sight-saving treatments.NEI's research activities are organized into five programs: retinal diseases; corneal diseases; lens and cataract; glaucoma; and strabismus, amblyopia, and visual processing. Each of the five programs is designed to facilitate acquisition of new knowledge regarding basic visual processes in health and disease and to foster the application of laboratory knowledge to the solution of clinical problems.

NATIONAL EYE INSTITUTE

Selected Achievements and Initiatives:

Intravitreal Implants: NEI-intramural scientists and scientists at the Emory University School of Medicine have recently demonstrated the safety and efficacy of an intravitreal implant that delivers ganciclovir directly to the site of retinal Cytomegalovirus (CMV) infection. CMV retinitis is a major blinding complication of AIDS. The implant releases ganciclovir for approximately eight months at a constant dose. Patients who received the implant in a recent study were free of all signs of active CMV retinal infection for a median of 226 days. This drug delivery system not only arrests sight threatening opportunistic CMV retinitis progression, but may also alleviate the need for CMV retinitis patients to receive daily intravenous treatment of systemic ganciclovir or foscarnet.

Juvenile Onset Glaucoma: NEI-supported researchers have shown that juvenile onset glaucoma displays an autosomal dominant pattern of inheritance. Scientists have successfully mapped a "glaucoma" gene to chromosome 1, and linage analysis has placed the gene to within approximately a 20-80 gene region on the chromosome. Isolation and characterization of the gene responsible for one form of glaucoma is a major step forward in identifying one causal factor of this disease and holds great promise for eventually understanding, treating, or preventing other forms of glaucoma.

Transfer of Genes into Human Ocular Tissues: NEI-intramural and extramural scientists are developing methods for the transfer of genes into human ocular tissues. Results from experiments in animal models of retinitis pigmentosa have demonstrated that adenovirus vectors can be used to deliver functional genes into retinal cells without harming the retina. Other researchers supported by the NEI are investigating methods to genetically alter the defective ornithine aminotransferase (OAT) gene in gyrate atrophy -- a degenerative retinal disorder, and to develop a vehicle to transfer the altered OAT gene into the patient.

Appropriation History
($ in thousands)

FY 1993	$276,188 (+2.7%)
FY 1994	$290,269 (+5.1%)
FY 1995	$299,973 (+3.3%)
FY 1996	$213,361 (+4.3%)

Extramural Research Project Grants Supported

FY 1993	1,193
FY 1994	1,210
FY 1995 (Est.)	1,225

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	85.4%
FY 1994	85.8%
FY 1995 (Est.)	85.9%

Success Rate - Research Project Grants

FY 1993	32.1%
FY 1994	39.6%
FY 1995 (Est.)	32.9%

Research Training
(# of FTE's supported)

FY 1993	280
FY 1994	261
FY 1995 (Est.)	270

Full-Time Equivalent Employees

FY 1995 (Est.)	251

Research Centers Supported

FY 1995 (Est.)	20

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Address:
National Heart, Lung, and Blood Institute
National Institutes of Health
31 Center Drive MSC 2486
Building 31, Room 5A52
Bethesda, MD 20892-2486

Director:
Claude Lenfant, M.D.
301-496-5166 (voice)
301-402-1056 (fax)
email:
lenfantc@gwgate.nhlbi.nih.gov

Legislative Liaison:
Sandra Lindsay
301-496-9899 (voice)
301-402-1056 (fax)
email:
lindsays@gwgate.nhlbi.nih.gov

Mission:

The National Heart, Lung, and Blood Institute (NHLBI) provides leadership for a national program in diseases of the heart, blood vessels, lung, and blood; sleep disorders; and blood resources. It plans, conducts, fosters, and supports an integrated and coordinated program of basic research, clinical investigations and trials, observational studies, demonstration and education projects related to the causes, prevention, diagnosis, and treatment of heart, blood vessel, lung, blood diseases, and sleep disorders conducted in its own laboratories and by scientific institutions and individuals supported by research grants and contracts. The Institute plans and directs research in the development, trial, and evaluation of interventions and devices related to prevention, treatment, and rehabilitation of patients suffering from such diseases and disorders.

The NHLBI also conducts research on the clinical use of blood and all aspects of the management of blood resources. It supports research training and career development of new and established researchers in fundamental sciences and clinical disciplines to enable them to conduct basic and clinical research related to heart, blood vessel, lung, and blood diseases; sleep disorders; and blood resources through individual and institutional research training awards and career development awards. The Institute coordinates with other research institutes and all federal health programs relevant activities in the above areas, including the related causes of stroke. It conducts educational activities, including development and dissemination of materials for health professionals and the public in the above areas, with emphasis on prevention. Finally, the NHLBI maintains continuing relationships with institutions and professional associations, and with international, national, state, and local officials as well as voluntary agencies and organizations working in the above areas.

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Selected Achievements and Initiatives:

Sickle Cell Disease: The NHLBI recently completed the Multicenter Study of Hydroxyurea, which evaluated the first therapeutic agent for sickle cell disease (SCD) to show promise of clinical efficacy without serious toxicity. Hydroxyurea increases fetal hemoglobin, which is believed to reduce the frequency of "crises," the painful episodes that are the most common and disabling feature of SCD. The trial was halted ahead of schedule when interim analysis of data indicated that daily treatment reduced the frequency of crises and associated hospitalizations by more than 50%. Moreover, hydroxyurea therapy resulted in a significant decrease in acute chest syndrome, a life-threatening complication of SCD, and greatly reduced the need for blood transfusions.

Postmenopausal Estrogen/Progestin Interventions: The Postmenopausal Estrogen/Progestin Interventions (PEPI) study found that all four of the hormone regimens tested produced increases in HDL ("good") cholesterol, and decreases in LDL ("bad") cholesterol and fibrinogen, a blood clotting factor predictive of stroke and heart attack. Although use of estrogen alone was associated with cell overgrowth in the uterine lining among study participants who had not had a hysterectomy, this potentially harmful condition did not occur among women taking any of the three estrogen/progestin combinations. The results of the PEPI study provide scientifically based guidance for postmenopausal women and their physicians seeking safe hormone regimens that will improve their heart disease risk factors.

Smoking Cessation: The Lung Health Study (LHS) revealed that smoking cessation can reduce chances for development of chronic obstructive pulmonary disease (COPD) in high-risk smokers. The study recruited middle-aged smokers who had reduced lung function and randomly assigned them to receive a smoking intervention or usual care. After 5 years of follow up, participants in the smoking intervention program experienced significantly less loss of lung function than persons in the usual care group. The LHS smoking cessation intervention realized a 5-year sustained quit rate higher than any ever reported in a major study (22%). Application of the LHS findings can be expected to have a significant impact on the suffering and health care costs associated with COPD.

Appropriation History
($ in thousands)

FY 1993	$1,214,793 (+2.2%)
FY 1994	$1,277,880 (+5.2%)
FY 1995	$1,314,969 (+2.9%)
FY 1996	$1,352,360 (+4.4%)

Extramural Research Project Grants Supported

FY 1993	3,254
FY 1994	3,308
FY 1995	3,288

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	87%
FY 1994	87%
FY 1995 (Est.)	88%

Success Rate - Research Project Grants

FY 1993	22%
FY 1994	23%
FY 1995 (Est.)	24%

Research Training
(# of FTE's supported)

FY 1993	1,557
FY 1994	1,711
FY 1995	1,690

Full-Time Equivalent Employees

FY 1995	822

Research Centers Supported

FY 1995	75

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Address:
National Institute of Allergy
and Infectious Diseases
National Institutes of Health
31 Center Drive MSC 2520
Building 31, Room 7A03
Bethesda, MD 20892-2520

Director:
Anthony S. Fauci, M.D.
301-496-2263 (voice)

Legislative Liaison:
Linda S. Scott
301-496-6752 (voice)
301-402-0492 (fax)
email: ls9i@nih.gov

Mission:
The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports research to study the causes of allergic, immunologic, and infectious diseases; and to develop better means of preventing, diagnosing, and treating these illnesses. Encompassed in the Institute's mission are studies on the acquired immunodeficiency syndrome (AIDS), asthma and allergic diseases, enteric diseases, immunologic diseases, respiratory infections, sexually transmitted diseases, transplantation, tropical diseases, tuberculosis, and vaccine development.

Selected Achievements and Initiatives:
Acellular pertussis vaccines have fewer side effects than the current vaccine: In two large NIAID-supported clinical trials, researchers in Italy and Sweden have shown that three new acellular vaccines are highly effective in protecting infants against pertussis (whooping cough) and have fewer side effects than the currently used vaccine. The current vaccine made from whole, killed Bordatella pertussis organisms has been in use for nearly 50 years and has been extremely effective in controlling whooping cough in the United States. The whole-cell vaccine, however, has been associated with adverse side effects more frequently than other vaccines in general use for infants. Until the current NIAID-supported trials, only limited data on the efficacy and safety of acellular vaccines in young infants were available. Pertussis is a highly contagious respiratory disease. Worldwide, more than 50 million cases of pertussis and 350,000 pertussis deaths are estimated to occur each year.

Zidovudine reduces the rate of transmission of HIV from mother to infant: An NIAID-supported clinical trial (ACTG 076) showed that zidovudine (ZDV) therapy reduced by two-thirds the risk of transmission of human immunodeficiency virus (HIV) from HIV-infected pregnant women to their babies. The study demonstrated that a regimen of ZDV administered to the mother during pregnancy and during labor and delivery, as well as to her infant during the first six weeks of life, signifi-

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

cantly reduced the risk of maternal-infant transmission of HIV from 25.8% to 8.3%. The regimen was well-tolerated by both mothers and infants. Annually in the United States, an estimated 7,000 HIV-infected women give birth to infants, of which approximately 25% are HIV-infected. If this regimen were used universally, between 650 and 1,300 of these children would not become HIV-infected.

Vaccines developed to prevent hepatitis and to protect travelers to endemic regions: NIAID intramural investigators developed a strain of hepatitis A virus (HAV) that was used to produce a vaccine now licensed in 41 countries. Two doses of the vaccine are expected to protect against HAV for up to 10 years. HAV causes more than 1.4 million cases of hepatitis each year worldwide. In the United States, HAV accounts for about one-half of reported hepatitis cases. NIAID intramural scientists also developed and tested a hepatitis E (HEV) vaccine in cynomolgus monkeys and found that two doses of vaccine prevented HEV infection. Hepatitis E virus is the leading cause of acute hepatitis among adults in many developing countries, with a fatality rate of 15 to 20% in infected pregnant women. The investigators currently are pursuing the vaccine for use in humans.

Appropriation History
($ in thousands)

FY 1993	$979,471	(+2.1%)
FY 1994	$1,065,583	(+8.8%)
FY 1995	$1,094,258	(+2.7%)
FY 1996	$1,172,313	(+7.0%)

Extramural Research Project Grants Supported

FY 1993	2,931
FY 1994	3,006
FY 1995 (Est.)	3,030

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	82.1%
FY 1994	82.6%
FY 1995 (Est.)	82.7%

Success Rate - Research Project Grants

FY 1993	29.4%
FY 1994	24.5%
FY 1995 (Est.)	25.4%

Research Training
(# of FTE's supported)

FY 1993	801
FY 1994	818
FY 1995 (Est.)	818

Full-Time Equivalent Employees

FY 1995 (Est.)	1,107

Research Centers Supported

FY 1995 (Est.)	14

NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

Address:
National Institute of Arthritis and Musculoskeletal and Skin Diseases
National Institutes of Health
Building 31, Room 4C32
31 Center Drive, MSC 2350
Bethesda, MD 20892-2350

Director:
Stephen I. Katz, M.D., Ph.D.
301-496-4353 (voice)
301-480-6069 (fax)
email: sk48w@nih.gov

Legislative Liaison:
Randy Rupp
301-496-8271 (voice)
301-480-6069 (fax)
email:
ruppr@od.niams.nih.gov

Mission:
The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) was established in 1986 to conduct and support research, research training, clinical trials, and information dissemination on diseases of the joints, muscles, bones, connective tissue, and skin. Among the diseases within the mandate of the NIAMS are the many different forms of arthritis, including osteoarthritis --the most common of the rheumatic diseases-- and rheumatoid arthritis. Also included are bone diseases, such as osteoporosis and Paget's disease; skin diseases, such as psoriasis, epidermolysis bullosa, and ichthyosis; autoimmune diseases, such as systemic lupus erythematosus; connective tissue diseases, such as scleroderma and Marfan syndrome; musculoskeletal and muscle diseases, including low back pain and sports injuries; and occupational diseases, such as repetitive motion syndrome.

These diseases include many of the most costly, chronic, and crippling conditions affecting the health of Americans. They strike people of all ages, every race, and both genders. Some disproportionately affect women, minorities, children, the elderly or athletes. Altogether, they afflict millions, cause tremendous human suffering, and cost the nation billions of dollars in health care and lost productivity.

Selected Achievements and Initiatives:
Normal Intestinal Bacteria Play a Role in Some Forms of Arthritis: In a novel study on the causes of spinal arthritis, NIAMS-supported researchers have shown that both a bacterial trigger and genetic susceptibility are necessary for the disease to occur in animals. Earlier related studies showed that rats carrying a human gene known as HLA-B27 develop joint inflammation and other symptoms characteristic of human spinal arthritis. Researchers now report that when these rats are raised in a germ-free environment, they no longer develop the arthritis symptoms. These latest experiments show that although the gene plays a central role, intestinal bacteria are needed to trigger the arthritis. The discovery could lead to development of highly specific treatments to prevent arthritis and intestinal inflammation in the large percentage of spinal arthritis patients who carry the HLA-B27 gene.

NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

Researchers Identify Genetic Cause of Lamellar Ichthyosis: A team of researchers led by NIAMS intramural scientists recently discovered that lamellar ichthyosis, a severely disfiguring congenital skin disorder, is caused by genetic defects in a particular skin enzyme. Lamellar ichthyosis is one of a group of inherited scaling skin disorders known as the ichthyoses. It causes a thickening and scaling of the outermost layer of the skin that is characterized by the development of large, brown, plate-like scales all over the body. Researchers believe this thickening and scaling are due to abnormalities in the process by which the epidermis renews itself. The discovery of this genetic defect in ichthyosis patients provides insight into the cause of lamellar ichthyosis and a large number of other scaling skin disorders. It also provides much needed insight into the process of normal skin development.

Octapeptide May Induce Lupus: Researchers studying lupus have shown that animals immunized with a small protein-like chemical called an octapeptide develop autoantibodies and other features considered typical of human systemic lupus erythematosus. Lupus is a serious autoimmune disease that disproportionately affects women, especially African-American women. In lupus, the body's immune system produces increased amounts of abnormal antibodies that react with and may damage the patient's own tissues. The new investigations show that an initial immune response to a simple structure may initiate an expanded autoimmune response that culminates in a systemic autoimmune disorder. These findings have important implications for understanding the development of lupus as well as other autoimmune diseases.

Appropriation History
($ in thousands)

FY 1993	$212,456 (+4.6%)
FY 1994	$223,204 (+5.1%)
FY 1995	$230,258 (+3.6%)
FY 1996	$243,231 (+5.2%)

Extramural Research Project Grants Supported

FY 1993	814
FY 1994	830
FY 1995	828

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	86.9%
FY 1994	87.3%
FY 1995 (Est.)	87.3%

Success Rate - Research Project Grants

FY 1993	20.9%
FY 1994	19.6%
FY 1995 (Est.)	18.7%

Research Training
(# of FTE's supported)

FY 1993	218
FY 1994	238
FY 1995 (Est.)	236

Full-Time Equivalent Employees

FY 1995 (Est.)	147

Research Centers Supported

FY 1995 (Est.)	30

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

Address:
National Institute of Child Health and Human Development
National Institutes of Health
Building 31, Room 2A03
9000 Rockville Pike
Bethesda, MD 20892

Director:
Duane Alexander, M.D.
301-496-3454 (voice)
301-402-1104 (fax)
email: da43w@nih.gov

Legislative Liaison:
George Gaines
301-496-1877 (voice)
301-496-4757 (fax)
email: gg36u@nih.gov

Mission:

The mission of the National Institute of Child Health and Human Development (NICHD) is to develop knowledge that will help to assure that every individual is born healthy and wanted and grows up free from disease and disability, able to enjoy a healthy and productive life. Institute programs are based on the concepts that adult health and well-being are determined in large part by episodes early in life and that human development is continuous throughout life. To achieve its mission, the NICHD supports a broad range of basic, clinical, and applied research as well as training related to such topics as reproduction, fertility, and pregnancy; infant and child health; pediatric, adolescent and maternal AIDS; growth and development; human learning and behavior; mental retardation and developmental disabilities; and medical rehabilitation.

Selected Achievements and Initiatives:

AZT Clinical Trial: In a major breakthrough, a study supported NICHD and the National Institute of Allergy and Infectious Diseases demonstrated that Zidovudine (AZT), given to relatively healthy HIV-infected pregnant women during pregnancy and labor/delivery and to their offspring for six weeks following delivery, reduced the transmission rate of HIV by approximately two-thirds. Consequently, the Public Health Service has developed new guidelines for the counselling and voluntary testing of pregnant women and on the use of AZT to reduce the risk of HIV transmission. Current estimates indicate that in the United States alone, AZT therapy could prevent HIV infection in 1,300 children per year.

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

Reducing the Risk of Sudden Infant Death Syndrome (SIDS): In the U.S. SIDS is the leading cause of death for infants between the first and twelfth months of life. To help reduce this number, the NICHD initiated a nationwide education campaign to persuade parents and other caregivers of newborns to place a healthy baby on its back or side to sleep. This recommendation is based on international data showing that deaths from SIDS dropped 50% or more following changes in sleep position after similar public education campaigns. Preliminary reports indicate that U.S. SIDS rates may have dropped within the past year.

Preventing Neural Tube Defects: A research team led by NICHD investigators identified a metabolic defect that may cause neural tube defects (NTDs), including spina bifida and anencephaly. While it was known that folic acid supplements taken early in a woman's pregnancy reduces the risk of bearing a child with NTDs, this study helps explain why and suggests that 1) the addition of folic acid may help overcome this metabolic abnormality and 2) vitamin B12, together with folic acid, may be more effective in preventing NTDs than giving folic acid alone. Further studies may enable researchers to identify women who have this metabolic abnormality.

Appropriation History
($ in thousands)

FY 1993	$527,788 (+1.8%)
FY 1994	$554,881 (+5.1%)
FY 1995	$570,394 (+2.8%)
FY 1996	$593,719 (+4.5%)

Extramural Research Project Grants Supported

FY 1993	1,625
FY 1994	1,602
FY 1995	1,537

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	77.9%
FY 1994	78.0%
FY 1995	78.4%

Success Rate - Research Project Grants

FY 1993	21.3%
FY 1994	20.5%
FY 1995 (Est.)	17.0%

Research Training
(# of FTE's supported)

FY 1993	767
FY 1994	727
FY 1995	747

Full-Time Equivalent Employees

FY 1995	481

Research Centers Supported

FY 1995	77

NATIONAL INSTITUTE OF DENTAL RESEARCH

Address:
National Institute of Dental Research
National Institutes of Health
Building 31, Room 2C39
31 Center Drive MSC 2290
Bethesda, MD 20892-2290

Director:
Harold C. Slavkin, D.D.S.
301-496-3571 (voice)
301-402-2185 (fax)
email:
slavkinh@od31.nidr.nih.gov

Legislative Liaison:
Joan Wilentz
301-496-6705 (voice)
301-496-9988 (fax)
email:
wilentzj@od31.nidr.nih.gov

Mission Statement:

The National Institute of Dental Research (NIDR) provides leadership for scientific research activities on diseases and disorders affecting dental, oral, and craniofacial structures. Research training and science and technology transfer are also central to the NIDR mission. Major areas of interest include dental caries, periodontal diseases, oral cancer, AIDS, birth defects, soft tissue diseases, bone and joint diseases, chronic pain conditions, epidemiology, behavioral science, and materials development.

Selected Achievements and Initiatives:

Inhibiting Infection by the AIDS Virus (HIV): Scientists have identified a factor in saliva that prevents HIV from infecting white blood cells. This finding may help explain why HIV is virtually never transmitted orally. In their investigations, a team of scientists identified a protein called Secretory Leukocyte Protease Inhibitor (SLPI) as the specific component in saliva responsible for this action. Their study also suggests that SLPI works by conferring resistance to infection on the host cell, rather than by attacking the virus itself. Further research may lead to the development of SLPI for use as a protective barrier against HIV invasion at mucosal sites or, injected into the bloodstream, to prevent further infection of circulating white blood cells.

Gene Therapy & Gene Therapeutics: For the first time oral health scientists have successfully introduced human and bacterial genes into the salivary glands of rats. This breakthrough offers possibilities for repairing diseased or damaged salivary glands (gene therapy) and for enabling glands to produce therapeutic doses of disease-fighting proteins into the mouth and/or bloodstream (gene therapeutics). For example, gene therapy approaches are being tested to repair salivary glands damaged by radiation or diseases, such as Sjogren's syndrome. Recently, a gene that produces histatin, a protein that helps combat oral yeast infections, has been successfully transferred to salivary glands. Therapeutic doses of histatin should help control chronic yeast infections in immuno-suppressed patients.

NATIONAL INSTITUTE OF DENTAL RESEARCH (NIDR)

Craniofacial Genes and Birth Defects: Researchers have created an animal model of craniosynostosis, a human birth defect that causes the skull to close prematurely and results in severe deformity. This breakthrough provides a valuable tool for further study with the goal of understanding and preventing the disorder. The effort is part of an overall NIDR project to identify novel genes involved in craniofacial and tooth development. To date, over 1,000 genes have been partially sequenced. Of these, researchers have mapped 70 relating to craniofacial disorders, among the most common birth defects.

Appropriation History
($ in thousands)

FY 1993	$161,301 (+1.8%)
FY 1994	$169,520 (+5.1%)
FY 1995	$174,392 (+2.9%)
FY 1996	$183,751 (+5.0%)

Extramural Research Project Grants Supported

FY 1993	637
FY 1994	690
FY 1995 (Est.)	657

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	74%
FY 1994	75%
FY 1995 (Est.)	75%

Success Rate - Research Project Grants

FY 1993	24%
FY 1994	28%
FY 1995 (Est.)	29%

Research Training
(# of FTE's supported)

FY 1993	200
FY 1994	210
FY 1995 (Est.)	210

Full-Time Equivalent Employees

FY 1995 (Est.)	305

Research Centers Supported

FY 1995 (Est.)	26

NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

Address:

National Institute of Diabetes and Digestive and Kidney Diseases
National Institutes of Health
Building 31, Room 9A52
31 Center Drive MSC 2560
Bethesda, MD 20892-2560

Director:

Phillip Gorden, M.D.
301-496-5877 (voice)
301-402-2125 (fax)
email:
gorden@niddkhq.niddk.nih.gov

Legislative Liaison:

Carol Feld
301-496-6623 (voice)
301-402-7422 (fax)
email:feldc@niddkhq.niddk.nih.gov

Mission:

The National Institutes of Diabetes and Digestive and Kidney Diseases (NIDDK) conducts and supports research on many serious and costly diseases affecting the public health. Several diseases within the Institute's purview are among the leading causes of disability and death; all seriously affect the quality of life of those who have them. Their economic burden exceeds $300 billion annually. The NIDDK's Division of Diabetes, Endocrinology, and Metabolic Diseases is responsible for extramural research and research training related to diabetes mellitus; endocrinology, including osteoporosis; and metabolic diseases, including cystic fibrosis, an area for which the Institute has lead responsibility within the NIH. The Division of Digestive Diseases and Nutrition has responsibility for managing research programs related to digestive diseases including those of the liver and biliary tract, pancreas, and gastrointestinal tract; and nutrition including obesity and eating disorders. The Division of Kidney, Urologic, and Hematologic Diseases supports research on the physiology, pathophysiology, and diseases of the kidney, genitourinary tract, and the blood-forming organs to improve or develop preventive, diagnostic, and treatment methods. The Division of Intramural Research conducts research and training within the Institute's laboratories and clinical facilities in Bethesda, Maryland, and Phoenix, Arizona. Shared interests in the biochemical and genetic processes underlying disease link the programs and division of the Institute, while close communications between the NIDDK and other NIH programs also foster a confluence of fundamental knowledge in these vital areas of investigation. A focus on basic research has traditionally guided the Institute's programs.

Selected Achievments and Initiatives:

Diabetes Control: The results of the NIDDK's landmark Diabetes Control and Complications Trial (DCCT) showed that very careful management of blood glucose levels can lead to a 50% or greater reduction in the risk of life-threatening microvascular complications --eye, kidney, and nerve damage-- due to diabetes. The largest, most comprehensive diabetes study ever conducted, the DCCT involved over 1,400 volunteers with insulin-dependent diabetes mellitus (IDDM) at 29 medical centers in the United States and Canada. The study compared the effects of two treatment regimes --standard therapy and intensive control-- on the complications of diabetes. The results of the study showed that intensive therapy could reduce the risk of diabetic eye disease by 76%, kidney disease by 50%, and nerve disease by 60%.

NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

Obestity Research: In perhaps the greatest discovery in obesity research to date, NIDDK grantees reported cloning the mouse ob gene, which results in profound obesity and contributes to non-insulin-dependent diabetes mellitus. They also identified a human gene that is 84% homologous to the mouse gene. The normal mouse ob gene appears to be switched on in fat tissue, where it generates its protein product. Researchers believe the protein then is secreted into the bloodstream and, once it reaches the appetite-controlling area of the brain, acts to regulate food intake. It is in this way that the ob gene controls the balance of food intake required for energy expenditure. The mutant form of the ob gene may produce little or no protein and result in a lack of appetite control. Intake of more calories than are required for the amount of energy expended would lead to weight gain and fat deposition. In subsequent studies by the same investigators, administration of the protein encoded by the ob gene led to a 30% weight reduction in genetically obese mice and a 12% weight reduction in overweight but genetically normal mice. Although it is likely that multiple genes and proteins are implicated in human obesity, researchers are optimistic that these findings may lead to more effective medical therapies for weight proteins in people, and to testing for genetic predispositions for obesity early in life. Obesity prevention would in turn reduce the prevalence of many chronic diseases, including non-insulin-dependent diabetes, cardiovascular disease, certain cancers, gallstones, and stroke.

Polycystic Kidney Disease: Research on autosomal dominant polycystic kidney disease (PKD) gained momentum recently with the identification and sequencing of a major PKD gene. The search for the gene was set in motion by NIDDK-supported studies that, in 1985, linked the genetic mutations in PKD to a region (PKD1 locus) of chromosome 16. That search has now culminated in the identification of a defective gene, at the PKD1 locus, by the European PKD Consortium and the sequencing of the gene by an NIDDK-supported American consortium of PKD researchers. The identification and sequencing of the PKD1 gene should make it possible to determine the normal role of the PKD1 protein in the cell and the mechanisms by which gene mutations cause the human disease. Cystic disease is the fourth leading cause of end-stage renal disease in the United States.

Appropriation History
($ in thousands)

FY 1993	$681,342 (+3.4%)
FY 1994	$716,054 (+5.1%)
FY 1995	$738,380 (+3.1%)
FY 1996	$769,200 (+4.5%)

Extramural Research Project Grants Supported

FY 1993	2,417
FY 1994	2,557
FY 1995 (Est.)	2,567

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	84.2%
FY 1994	84.9%
FY 1995 (Est.)	85.0%

Success Rate - Research Project Grants

FY 1993	22%
FY 1994	25%
FY 1995 (Est.)	25%

Research Training
(# of FTE's supported)

FY 1993	855
FY 1994	905
FY 1995 (Est.)	945

Full-Time Equivalent Employees

FY 1995 (Est.)	556

Research Centers Supported

FY 1995 (Est.)	59

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

Address:
National Institute of Environmental Health Sciences
National Institutes of Health
Building 101, B242
P.O. Box 12233
Research Triangle Park, NC 27709

Director:
Kenneth Olden, Ph.D.
919-541-3201 (voice)
919-541-2260 (fax)

Legislative Liaison:
Mary Gant
301-496-2919 (voice)
301-496-0563 (fax)
email: mg62y@nih.gov

Mission:

The mission of the National Institute of Environmental Health Sciences (NIEHS) is to reduce the burden of environmentally associated diseases and dysfunctions by understanding (1) how environmental exposures affect our health, (2) how individuals differ in their susceptibility to these exposures, and (3) how these susceptibilities change as a function of time and age. The NIEHS achieves its mission through multidisciplinary biomedical research programs, prevention and intervention efforts, and communication strategies that encompass training, education, technology transfer, and community outreach.

Selected Achievements and Initiatives:

Breast, Ovarian, and Prostate Cancer: The understanding of the genetic basis for three devastating diseases - breast cancer, ovarian cancer, and prostate cancer - has been significantly advanced by researchers supported by the National Institute of Environmental Health Sciences. Over the past year, the gene conferring susceptibility to dual breast cancer and ovarian cancer, BRCA1, and the gene controlling the metastasis or spread of prostate cancer, KAI1, have been located by NIEHS scientists collaborating with other research organizations. Discovery of these genes will enable researchers to determine how environmental exposures can mutate or otherwise influence genetic material, leading to development of these cancers. The most immediate impact of these discoveries will be in the area ofscreening to identify individuals at risk for development of early-onset breast and ovarian cancer or the deadly form of prostate cancer.

Molecular Prevention/Intervention of Environmentally Induced Cancers: DNA repair proteins are one of the body's most important defenses against environmental carcinogens. NIEHS-supported researchers studying this vital protective mechanism have developed a transgenic mouse model that illustrates the future promise of molecular intervention technologies. This mouse can be made to overexpress a specific human DNA repair gene in targeted organs. Using this transgenic model, investigators can study the ability of a human DNA repair protein to help resist tumor induction by com-

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

mon environmental carcinogens. In one set of experiments, mice overexpressing this human gene in the thymus had a dramatically reduced incidence of lymphoma/leukemia following exposure to methylnitrosourea. When the DNA repair gene was introduced into the colon, treated mice had a reduced incidence of induced precancerous foci in the colon. When this gene was overexpressed in the lung, the mice were protected from the lung tumor-induction properties of a tobacco smoke carcinogen. Mice that over-expressed this gene in the liver were protected from development of hepatic tumors following exposure to dimethylnitrosamine, a common environmental and industrial pollutant. In each instance, over expression of the gene in the corresponding tissue provided tissue specific protection from the methylating carcinogen.

Risk Assessment: Traditionally, risk assessments are based on results of two-year rodent assays. The time and expense of these assays restrict our ability to screen large numbers of chemicals. This fact is important in the arena of environmental health sciences because there are currently 70,000 chemicals in commerce with little or no toxicologic data. It is also important to pharmaceutical and chemical companies because it adds to the time and cost of development for new products. The NIEHS, under the auspices of the National Toxicology Program (NTP), is on the threshold of developing and validating new animal models and test systems to reduce dependency on the current rodent assays. Preliminary results suggest that models can be developed that are less costly and can be performed more rapidly. Such test systems will allow for screening of dozens of chemicals annually and the results will be more relevant for the assessment of risk to human health.

Appropriation History
($ in thousands)

FY 1993	$251,187 (+1.1%)
FY 1994	$264,249 (+5.2%)
FY 1995	$272,733 (+3.2%)
FY 1996	$288,134 (+5.8%)

Extramural Research Project Grants Supported

FY 1993	449
FY 1994	484
FY 1995 (Est.)	483

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	67%
FY 1994	69%
FY 1995 (Est.)	70%

Success Rate - Research Project Grants

FY 1993	21.1%
FY 1994	25.6%
FY 1995 (Est.)	18.6%

Research Training
(# of FTE's supported)

FY 1993	460
FY 1994	482
FY 1995 (Est.)	482

Full-Time Equivalent Employees

FY 1995 (Est.)	707

Research Centers Supported

FY 1995 (Est.)	20

NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

Address:
National Institute of General Medical Sciences
National Institutes of Health
45 Center Drive MSC 6200
Room 2AN.12B
Bethesda, MD 20892-6200

Acting Director:
Marvin Cassman, Ph.D.
301-594-2172 (voice)
301-402-0156 (fax)
email:
cassmanm@gm1.nigms.nih.gov

Legislative Liaison:
Warren Jones, Ph.D
301-594-5938 (voice)
301-480-2802 (fax)
email:
jonesw@gm1.nigms.nih.gov

Mission:
The National Institute of General Medical Sciences (NIGMS) primarily supports basic biomedical research that is not targeted to specific diseases or disorders. Because scientific breakthroughs often originate from such untargeted studies, NIGMS-funded work has contributed substantially to the tremendous progress that biomedical research has made in recent years.

The NIGMS supports many research training programs, especially in areas of particular needs, such as biotechnology, pharmacology, molecular biophysics, and the chemistry-biology interface. The Institute also supports training programs aimed at increasing the numbers of physicians and underrepresented minorities who are engaged in biomedical research.

NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

Selected Achievements and Initiatives:

Screening System for Random Short-Sequence Molecules: A particularly promising result of many years of NIGMS support is a system, called SELEX, for finding RNA segments that will bind to an extremely wide range of target molecules. This system, which can be used to screen literally trillions of different random short-sequence molecules, can yield sequences that are so specific they are able to discriminate between molecules that differ from each other by only a single chemical group. The new molecules discovered through SELEX will be useful for a variety of diagnostic and therapeutic purposes.

Knock-Out Mice: Another research achievement that was supported by the NIGMS from its very early beginnings is the development of knock-out mouse models for the study of genetic disorders and the functions of single genes. Knock-out mice, which are engineered to contain modifications in specific genes, are now being used in many research laboratories. Recently, researchers used a knock-out mouse model to study genes involved in hypertension, a condition that affects about 20% of adults in the United States. These researchers were able to demonstrate the direct effects of two major regulatory molecules on hypertension.

Gene Therapy: Long term studies of immunosuppressant drugs, including one called FK506, have yielded many new developments including a possible form of gene therapy. An NIGMS-supported researcher redesigned FK506 to control artificial receptors in genetically engineered T cells, which enabled him to turn the production of a protein on and off. Although still very basic, this work has important therapeutic potential. Eventually, it may be possible for someone with diabetes, for example, to simply swallow a drug to turn on modified insulin genes, instead of injecting insulin.

Appropriation History
($ in thousands)

FY 1993	$832,581 (+1.9%)
FY 1994	$875,511 (+4.9%)
FY 1995	$904,925 (+3.4%)
FY 1996	$944,484 (+4.4%)

Extramural Research Project Grants Supported

FY 1993	3,573
FY 1994	3,592
FY 1995 (Est.)	3,599

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	85%
FY 1994	85%
FY 1995 (Est.)	85%

Success Rate - Research Project Grants

FY 1993	30%
FY 1994	33%
FY 1995 (Est.)	37%

Research Training
(# of FTE's supported)

FY 1993	4,325
FY 1994	4,441
FY 1995 (Est.)	4,567

Full-Time Equivalent Employees

FY 1995 (Est.)	182

Research Centers Supported

FY 1995 (Est.)	9

NATIONAL INSTITUTE OF MENTAL HEALTH

Address:
National Institute of Mental Health
National Institutes of Health
Parklawn Building
Room 17-99
5600 Fishers Lane
Rockville, MD 20857-8030

Acting Director:
Rex William Cowdry, M.D.
301-443-3673 (voice)
301-443-2578 (fax)
email: rcowdry@nih.gov

Legislative Liaison:
Louis Steinberg
301-443-3175 (voice)
301-443-7264 (fax)
email: lsteinbe@nih.gov

Mission:

The research programs of the National Institute of Mental Health (NIMH) lead the federal effort to identify the causes of --and the most effective treatments for-- mental illnesses, which afflict more than one in five Americans. Mental illnesses cost the nation more than $148 billion each year in direct and indirect costs. For example, a recent study estimated that reduced productivity from depression amounted to $3,000 annually for each depressed worker or $180 for every U.S. employee. Severe mental illnesses, such as schizophrenia, affect approximately five million adult Americans annually and account for $14 billion, or 25%, of all annual federal disability payments (Social Security Insurance and Social Security Disability Insurance). One result of NIMH research has been a new awareness that undiagnosed and untreated mental illness, in all its forms and with all of its consequences, is as damaging as physical illness is to the nation's well-being.

NIMH research brings a unique multidisciplinary approach to the human brain and behavior in health and in illness, integrating findings from the neurosciences, basic behavioral sciences, clinical research, epidemiology, prevention research, and mental health services research. Within this overall approach, the Institute supports basic research and research addressing the causes of and treatments for specific mental disorders, such as schizophrenia, mood disorders, anxiety disorders, eating disorders, Alzheimer's disease, and childhood mental illnesses. NIMH research includes the mental health needs of special populations, such as rural areas, racial and ethnic minority populations, and women.

NATIONAL INSTITUTE OF MENTAL HEALTH

Selected Achievements and Initiatives:

Schizophrenia: NIMH-funded investigators, using state-of-the-art imaging techniques recently have discovered specific, subtle abnormalities in the brains of people with schizophrenia that may provide new insights into the origins of the disease. An intriguing finding by developmental neurobiologists is that schizophrenia may be a disorder that results when neurons form inappropriate connections during development. These errors may lie dormant until puberty, when changes in the brain that occur normally at this stage interact adversely with the faulty connections. This research has spurred efforts to identify possible prenatal factors.

Affective (Mood) Disorders: Researchers at the NIHM recently identified a biochemical mechanism involved in lithium's remarkable effects in modifying the symptoms of both mania and depression. Neuroscientists now are using this information in their search for the origins of manic depressive illness and also in efforts to design new medications for those whose symptoms do not respond to lithium. In other research, investigators are surveying the entire human genome for genes linked to these disorders. To date, they have located two plausible candidate genes whose functions fit with known biochemical data about depression and manic depressive illness.

Human Brain Project: The NIMH is leading 10 other agencies and institutes, as well as the supercomputer and information science communities in both universities and federal laboratories, in the Human Brain Project, with a goal to promote communication and collaboration across scientific disciplines and geographic locations. This initiative supports research and development of advanced technologies to open information superhighways to neuroscientists and behavioral scientists for the 21st century. This extraordinary project has been enthusiastically endorsed by the Institute of Medicine.

Appropriation History
($ in thousands)

FY 1993	$583,651 (+4.1%)
FY 1994	$613,444 (+5.1%)
FY 1995	$632,424 (+3.1%)
FY 1996	$659,795 (+4.7%)

Extramural Research Project Grants Supported

FY 1993	1,725
FY 1994	1,780
FY 1995	1,809

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	77.5%
FY 1994	79.1%
FY 1995 (Est.)	79.7%

Success Rate - Research Project Grants

FY 1993	20.0%
FY 1994	20.7%
FY 1995	21.1%

Research Training
(# of FTE's supported)

FY 1993	1,289
FY 1994	1,251
FY 1995	1,356

Full-Time Equivalent Employees
FY 1995 (Est.) 866

Research Centers Supported
FY 1995 (Est.) 59

NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE

Address:
National Institute of
Neurological Disorders and
Stroke
National Institutes of Health
Building 31, Room 8A52
31 Center Drive, MSC 2540
Bethesda, MD 20892-2540

Director:
Zach W. Hall, Ph.D.
301-496-9746 (voice)
301-496-0296 (fax)
email:
hallz@magic.dcrt.nih.gov

Legislative Liaison:
Mary L. Miers
301-496-9271 (voice)
301-402-2186 (fax)
email:mary_miers@nih.gov

Mission:

The National Institute of Neurological Disorders and Stroke (NINDS) supports and conducts research on brain and nervous system disorders. Neurological disorders, which number more than 600, strike an estimated 50 million Americans each year. By supporting and conducting neurological research, the NINDS seeks better understanding, diagnosis, treatment and prevention of these disorders. To achieve this goal, the Institute relies on both clinical and basic research.

Clinical research applies directly to disease detection, prevention and treatment, as in studies of brain imaging techniques and in trials to test new drugs or surgeries for stroke. Some key areas of NINDS research include: AIDS, amyotrophic lateral sclerosis (ALS), Alzheimer's disease, developmental disorders, epilepsy, neurogenetic disorders, head and spinal cord injury, multiple sclerosis, pain, Parkinson's disease, sleep disorders, and stroke.

Basic research pursues an understanding of the structure and activities of the human brain. The answers gained through this research can create the foundation for diagnosing and treating brain disease in the future. Some important areas of NINDS basic research include: biology of the nerve cell, brain development, genetics of the brain, neural signaling, learning and memory, motor control and integration, and sensory function. Most NINDS-funded research is conducted by extramural scientists in public and private institutions, such as universities, medical schools, and hospitals. NINDS intramural scientists, working in Institute branches and laboratories, also conduct a wide array of neurological research.

The NINDS also funds research training and development to help ensure expertise in the neurological sciences for the future. In addition, an active public information program provides physicians, patients and the public with educational materials and research highlights on many neurological disorders.

NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE

Selected Achievements and Initiatives:

Stroke: Stroke, the nation's third leading killer, occurs when brain cells die because of decreased blood flow to the brain. In a collaborative study supported by the NINDS, investigators found that a surgical procedure, carotid endarterectomy, helps prevent stroke in selected individuals who have no outward symptoms of the disease but are at risk for stroke from severe narrowing (stenosis) of a carotid artery. Carotid stenosis is the major contributor to strokes caused by the blockage of a blood vessel. Findings from the study could prevent many thousands of disabling strokes among the estimated 500,000 Americans who suffer a stroke each year.

Alzheimer's disease: Alzheimer's disease (AD) is the most common cause of dementia. AD progressively destroys memory and personality in large numbers of older individuals worldwide. Several genes have been linked to AD. NINDS-supported scientists recently discovered a gene on chromosome 14 that has been linked to approximately 70-80% of cases in which AD is inherited and has an early onset. This gene is believed to cause the most aggressive form of AD. Research aimed at understanding how this gene works promises to yield major insights into the progression of AD in all patients.

Amyotrophic Lateral Sclerosis: Amyotrophic lateral sclerosis (ALS), a fatal disease that leads to muscle wasting and progressive paralysis, affects an estimated 20,000 Americans. Several years ago investigators made a major advance when they discovered that an inherited form of ALS involves a gene that produces aberrant forms of superoxide dismutase, an enzyme that removes toxic products of cellular metabolism. NINDS grantees have now produced transgenic mice that express forms of this gene. The mice develop limb weakness and neuronal degeneration similar to that seen in ALS patients. Further studies with this important new model should yield insights into the pathogenesis of ALS and allow testing of new therapies.

Appropriation History
($ in thousands)

FY 1993	$600,078 (+3.8%)
FY 1994	$630,650 (+5.1%)
FY 1995	$649,251 (+2.9%)
FY 1996	$688,085 (+5.6%)

Extramural Research Project Grants Supported

FY 1993	2,064
FY 1994	2,174
FY 1995	2,162

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	83%
FY 1994	84%
FY 1995 (Est.)	84%

Success Rate - Research Project Grants

FY 1993	25%
FY 1994	26%
FY 1995	31%

Research Training
(# of FTE's supported)

FY 1993	504
FY 1994	536
FY 1995	543

Full-Time Equivalent Employees

FY 1995	649

Research Centers Supported

FY 1995	42

NATIONAL INSTITUTE OF NURSING RESEARCH

Address:
National Institute of Nursing Research
National Institutes of Health
Building 31, Room 5B03
31 Center Drive, MSC 2178
Bethesda, MD 20892-2178

Director:
Patricia A. Grady, Ph.D.
301-496-8230 (voice)
301-594-3405 (fax)
email:
pgrady@opae.ninr.nih.gov

Legislative Liaison:
Linda Cook
301-496-0207 (voice)
301-480-4969 (fax)
email:lcook@opae.ninr.nih.gov

Mission:

The National Institute of Nursing Research (NINR) supports research on the biological and behavioral aspects of critical health problems that confront the nation. According to its broad mandate, the Institute seeks to reduce the burden of illness and disability by understanding and easing the effects of acute and chronic illness; to improve health-related quality of life by preventing or delaying the onset of disease or slowing its progression; to establish better approaches to promoting health and preventing disease; and to improve clinical environments by testing interventions that influence patient health outcomes and reduce costs and demand for care.

Particular emphasis is placed on subsets of the population who have special health problems and needs, such as older people, women and minorities, and residents of rural areas. Research seeks to discover how cultural and ethnic identity affect behavior and differences in risk patterns and to determine the influence of socioeconomic status, geographic location, and other factors on health-related attitudes, decisions, and behaviors.

NINR's intramural investigations center on managing symptoms of chronic illness, such as nutritional changes, myopathy, and fatigue that occur during treatment for HIV disease. Other studies, which focus on quality of life as an outcome of chronic illness, are being conducted with caregivers of persons with Alzheimer's disease and with persons with AIDS.

The NINR fosters collaborations with many other disciplines in areas of mutual interest, such as long-term care for at-risk older people, genetic testing and counseling, behavioral aspects of tuberculosis, the special needs of women with physical disabilities, and environmental influences on risk factors related to chronic illness.

The Institute also supports comprehensive research training and career development programs to prepare individuals with requisite interdisciplinary skills to conduct nursing research.

NATIONAL INSTITUTE OF NURSING RESEARCH

Selected Achievements and Initiatives:

Successful Early Hospital Discharge Through Planned Transitional Care: Combining earlier hospital discharge with comprehensive home follow-up care has been shown to lower costs, reduce re-hospitalizations, and improve health outcomes. This program has been tested in two groups of patients undergoing in-patient procedures. In older cardiac patients at six weeks after discharge, only 10% of those who received the intervention had been readmitted compared to 23% of those who received traditional care. The discharge program also reduced days of re-hospitalization and total costs. These findings are consistent with studies of planned discharge in a group of hospitalized women. Among these patients, cost savings of 29% were achieved for women who had cesarean births, 38% for diabetic new mothers, and 6% for women who had hysterectomies. These women also had fewer re-hospitalizations and expressed greater satisfaction with their care.

Effective Classroom Education for Healthy Hearts: A health program to reduce risk factors for cardiovascular disease is being tested on 21 rural and urban elementary schools in North Carolina. The study shows that this program for children in routine classroom situations increases their knowledge about cardiovascular risk factors and results in improved health behaviors and reduced cholesterol levels. This low-cost, large-group approach is as effective as small group interventions.

Delayed Progression of Alzheimer's Disease Symptoms: The disruptive behavioral symptoms--screaming, wandering, aggression, and incontinence--that occur in the later stages of Alzheimer's disease place excessive demands on caregivers and often lead to more costly types of care. A program of mental stimulation exercises that can be easily administered by family caregivers in the home has been shown to slow the progression of disease symptoms, allowing patients to live more independently and relieving caregivers. This simple approach to symptom management has great potential for reducing the financial costs and burden of care associated with this disease.

Appropriation History
($ in thousands)

FY 1993	$48,119 (+7.1%)
FY 1994	$51,018 (+6.0%)
FY 1995	$52,757 (+3.4%)
FY 1996	$55,693 (+5.8%)

Extramural Research Project Grants Supported

FY 1993	194
FY 1994	199
FY 1995 (Est.)	191

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	88%
FY 1994	88%
FY 1995 (Est.)	89%

Success Rate - Research Project Grants

FY 1993	11.3%
FY 1994	12.3%
FY 1995 (Est.)	26.1%

Research Training
(# of FTE's supported)

FY 1993	233
FY 1994	208
FY 1995 (Est.)	205

Full-Time Equivalent Employees

FY 1995 (Est.)	50

Research Centers Supported

FY 1995 (Est.)	7

NATIONAL INSTITUTE ON AGING

Address:
National Institute on Aging
National Institutes of Health
Building 31, Room 5C35
31 Center Dr. MSC 2292
Bethesda, MD 20892-2292

Director:
Richard J. Hodes, M.D.
301-496-9265 (voice)
301-496-2525 (fax)
email: hodesr@31.nia.nih.gov

Legislative Liaison:
Gail Jacoby
301- 496-3121 (voice)
301- 496-2793 (fax)
email: gj11r@nih.gov

Mission:

The National Institute on Aging (NIA) conducts biomedical, behavioral, and social research on aging processes to prevent disease and other problems of the aged, and to maintain the health and independence of older Americans. Alzheimer's disease is a particular NIA focus.

Selected Achievements and Initiatives:

Intervention can reduce the risk of falls and resulting hip fractures in older adults: Recent studies have provided convincing evidence of the benefits of exercise and other interventions for maintaining independent function in older people. A recent study shows that falls, a major source of disability among older people, can be prevented. Scientists recently reported on a "targeted intervention" strategy with a variety of risk factors for falls --such as sedative use, multiple medication use-- that reduces the rate of falls among older, frail individuals by at least 30%.

Fall-related injuries send almost 8% of people over age 70 to the emergency room each year. Acute care costs from hip fractures alone are about $10 billion annually and could double by the year 2020. Further, some 40% of people hospitalized for fall-related injuries don't go home, but are discharged into nursing homes, adding even more to the health care bill. Exercise, strength and balance training, and other proven means of reducing risk can markedly improve physical performance in both community dwelling and nursing home residents, as well as reduce the fear, physical and social decline, and increased mortality associated with falls.

Alzheimer's disease (AD): Investigators have found that individuals who inherit two copies of ApoE4 (one of the three variants of the Apolipoprotein gene) are 11 times more likely to develop the common, late-onset form of AD. The age of onset of AD in these individuals can also be as much as 20 years earlier than that of individuals with other forms of ApoE.

NATIONAL INSTITUTE ON AGING

Researchers have shown that people with two copies of ACT-A (a variant of the x1-antichymotrypsin gene) are 1.5 times more likely to develop AD. Individuals with two copies of both ACT-A and ApoE4 are 34 times more likely to develop AD. This finding highlights the importance of genetic risk factors in AD.

When asymptomatic individuals with the ApoE4 genotype were screened using PET brain imaging technology, researchers could identify abnormalities in brain function as much as 20 years before cognitive symptoms could be expected to emerge. Such indications would make early intervention feasible and offer the opportunity to prevent damage to the brain seen in fully developed AD.

A team of researchers discovered a gene on chromosome 14 responsible for up to 70-80% of cases of a very aggressive form of early-onset AD. Research on the function of this gene is expected to identify key information about the Alzheimer's disease process.

Combining the techniques of molecular biology and transgenic technology, scientists developed the first mouse model of AD. This model will promote research progress.

Age-Related Loss of Immune Function May Be Reversible or Preventable: Investigators have provided important insights into the underlying causes of age-related changes in the immune system that lead to decreased immune function and increased vulnerability to infectious diseases in older people. T-cells play a critical role in immune regulation. The fas gene helps maintain immune function by removing cells with defects and maintaining appropriate levels of T-cells through the process of programmed cell death. Using a "gene therapy" approach, scientists have caused aged mice to express a genetically engineered copy of the fas gene. This process restored the animals' T-cell function to a level comparable to that of young mice and prevented changes that contribute to impaired immune function in older mice. These may provide a basis for designing interventions to alter or prevent these changes.

Appropriation History
($ in thousands)

FY 1993	$399,924 (+4.3%)
FY 1994	$420,303 (+5.1%)
FY 1995	$434,038 (+3.3%)
FY 1996	$452,696 (+4.3%)

Extramural Research Project Grants Supported

FY 1993	1,252
FY 1994	1,299
FY 1995 (Est.)	1,323

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	84.4%
FY 1994	85.6%
FY 1995 (Est.)	85.9%

Success Rate - Research Project Grants

FY 1993	23.1%
FY 1994	24.5%
FY 1995 (Est.)	24.0%

Research Training
(# of FTE's supported)

FY 1993	456
FY 1994	470
FY 1995 (Est.)	472

Full-Time Equivalent Employees

FY 1995 (Est.)	444

Research Centers Supported

FY 1995 (Est.)	63

NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

Address:
National Institute on Alcohol Abuse and Alcoholism
National Institutes of Health
Willco Building
6000 Executive Boulevard
Bethesda, MD 20892

Director:
Enoch Gordis, M.D.
301-443-3885 (voice)
301-443-7043 (fax)
email:
egordis@willco.niaaa.nih.gov

Legislative Liaison:
Stephen Long
301-443-5080 (voice)
301-443-7787 (fax)
email:
slong@willco.niaaa.nih.gov

Mission:

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) is the preeminent federal entity for biomedical and behavioral research focused on improving the treatment and prevention of alcoholism, alcohol abuse, and related problems; and reducing the enormous health, social, and economic consequences that occur with abusive drinking. The Institute's mission is to provide leadership in the national effort to combat these problems by developing new knowledge that will reduce the incidence and prevalence of alcohol abuse, alcoholism, and the associated morbidity and mortality. The NIAAA (1) conducts and supports research aimed at determining the causes of alcoholism, discovering how alcohol damages the organs of the body, and developing prevention strategies for alcohol use disorders; (2) serves as a national resource for the collection, analysis, and dissemination of both scientific findings and improved methods for preventing and treating alcohol use problems; (3) supports training and development of scientists; (4) conducts policy studies that have broad implications for alcohol problem prevention, treatment, and rehabilitation activities; and (5) conducts epidemiological studies to assess the risks for and magnitude of alcohol-related problems.

NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

Selected Achievements and Initiatives:

Development of Medications for the Treatment of Alcoholism: Scientists supported by the NIAAA are investigating pharmacologic agents as promising adjunctive agents for the treatment of alcoholism. The recent FDA approval of naltrexone for the treatment of alcoholism was a significant step forward and presages a new era in medications development for alcohol researchers. Other promising medications also are being developed.

Molecular Genetics: In projects involving molecular studies, scientists directly examine gene structure, revealing differences in the makeup of key proteins involved in signal transmission among nerve cells. They also investigate the control of the expression of genes involved in the function of neurotransmitters. This work is important because alcohol itself, withdrawal from alcohol, and other stressors can alter the expression of genes and actually change the way the brain works.

Alcohol's Effect on Neurotransmitter-gated Ion Channels: Ethanol has been found to affect three types of excitatory neurotransmitter-gated ion channels. The NMDA channel in the mammalian central nervous system (CNS), thought to be involved in cognitive function and certain types of behavior, was affected at concentrations corresponding to intoxication, suggesting that alcohol-induced inhibition of NMDA channel function may contribute to the neural and cognitive impairments associated with intoxication. Other excitatory channels are inhibited at much higher concentrations of ethanol, suggesting that these may contribute to the general anesthetic effects of ethanol. An inhibitory channel normally potentiated by benzodiazepines was found also to be potentiated by ethanol, suggesting that this channel may contribute to the anxiolytic actions of ethanol. Ethanol was found to potentiate a channel normally activated by the neurotransmitter serotonin in a way that suggests ethanol may increase the potency of serotonin action.

Appropriation History
($ in thousands)

FY 1993	$176,619 (+2.7%)
FY 1994	$185,617 (+5.1%)
FY 1995	$190,997 (+2.9%)
FY 1996	$198,099 (+4.3%)

Extramural Research Project Grants Supported

FY 1993	529
FY 1994	556
FY 1995 (Est.)	580

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	80.4%
FY 1994	81.6%
FY 1995 (Est.)	82.1%

Success Rate - Research Project Grants

FY 1993	19%
FY 1994	29%
FY 1995 (Est.)	20%

Research Training
(# of FTE's supported)

FY 1993	149
FY 1994	195
FY 1995 (Est.)	189

Full-Time Equivalent Employees

FY 1995 (Est.)	235

Research Centers Supported

FY 1995 (Est.)	14

NATIONAL INSTITUTE ON DEAFNESS AND OTHER COMMUNICATION DISORDERS

Address:
National Institute on Deafness and Other Communication Disorders
National Institutes of Health
Building 31, Room 3C02
9000 Rockville Pike
Bethesda, MD 20892

Director:
James B. Snow, Jr., M.D.
301-402-0900 (voice)
301-402-1590 (fax)
301-496-6596 (TTY)
email: js219p@nih.gov

Legislative Liaison:
Marin Allen
301-496-7243 (voice)
301-402-0035 (fax)
301-402-0252 (TTY)
email: ma51v@nih.gov

Mission:
The National Institute on Deafness and Other Communication Disorders (NIDCD) conducts and supports biomedical and behavioral research and research training in the normal and disordered processes of hearing, balance, smell, taste, voice, speech and language. Disorders of human communication affect 46 million Americans. More than 28 million Americans are deaf or hard-of-hearing. The NIDCD accomplishes its mandate by conducting research in its own laboratories; supporting research by non-federal scientists in universities, medical schools, hospitals and research institutions; and facilitating the training of scientists in the fields of human communication research. Some of the research areas within the Institute's mission include hereditary forms of hearing impairment, Meniere's disease, loss of sense of smell, reduced taste function, spasmodic dysphonia, stuttering, and aphasia.

Selected Achievements and Initiatives:
Development of Vaccine for Otitis Media in Children: Otitis media is the leading cause for taking a young child to the emergency room or to a physician's office and the most frequent reason that doctors prescribe antibiotic therapy for children. There are ongoing efforts to develop a vaccine to combat this costly and often destructive disease. Scientists supported by the NIDCD have developed a candidate vaccine to prevent some types of otitis media in children. Using state-of-the-art molecular biological techniques, NIDCD-funded scientists are investigating the role of bacteria and viruses in otitis media that will provide unique insights into the development of a vaccine. This would significantly reduce the estimated $1 billion per year cost of this disease.

Improved Hearing Aids Could Help 20 Million Americans: The NIDCD is launching the first-ever, national clinical trials to determine for whom and under what circumstances the major types of hearing aid strategies are most helpful. While hearing aids continue to be the only form of remediation for most people with sensorineural hearing loss, only about 20% of those who are candidates for hearing aids actually have them. One reason for this is that hearing aids provide limited benefit,

NATIONAL INSTITUTE ON DEAFNESS AND OTHER COMMUNICATION DISORDERS

especially in noisy conditions. The clinical trials will identify subgroups of individuals who can benefit from existing and newly developed hearing aid technologies. This effort has the potential to benefit 20 million Americans who are hard of hearing.

Cochlear Implants to Benefit More Than One Million Americans: The cochlear implant is a device that, under the appropriate conditions, helps provide a sense of sound to persons who are totally or almost totally deaf. Currently, cochlear implants are available to adults and children age two and above who are profoundly deaf and are unable to understand speech even with powerful hearing aids. Recently, an independent panel of experts at an NIH consensus development conference sponsored by the NIDCD recommended expanding cochlear implants to adults with severe hearing loss who receive marginal benefit from hearing aids. This could potentially provide the ability to hear and understand speech to nearly one million people with severe hearing impairment.

Appropriation History
($ in thousands)

FY 1993	$154,814 (+4.0%)
FY 1994	$162,823 (+5.2%)
FY 1995	$168,313 (+3.4%)
FY 1996	$176,031 (+4.3%)

Extramural Research Project Grants Supported

FY 1993	609
FY 1994	635
FY 1995	625

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	86.9%
FY 1994	85.7%
FY 1995	84.8%

Success Rate - Research Project Grants

FY 1993	29.3%
FY 1994	32.0%
FY 1995 (Est.)	27.0%

Research Training
(# of FTE's supported)

FY 1993	189
FY 1994	203
FY 1995	246

Full-Time Equivalent Employees

FY 1995	125

Research Centers Supported

FY 1995 (Est.)	16

NATIONAL INSTITUTE ON DRUG ABUSE

Address:
National Institute on Drug Abuse
National Institutes of Health
Parklawn Building, Room 10-05
5600 Fishers Lane
Rockville, MD 20857

Director:
Alan I. Leshner, Ph.D.
301-443-6480 (voice)
301-443-9127 (fax)
email: apl@cu.nih.gov

Legislative Liaison:
Mary McLaughlin
301-443-6460 (voice)
301-443-6277 (fax)
email: mm211r@nih.gov

Mission:

The National Institute on Drug Abuse (NIDA) leads the nation in bringing the power of science to bear on drug abuse and addiction. This charge has two critical components. The first is the strategic support and conduct of research across a broad range of disciplines. The second is to ensure the rapid and effective dissemination and use of research results to improve prevention, treatment, and policy.

The NIDA's research ranges from basic studies of the molecular mechanisms of drug actions to applied research on the development of innovative prevention strategies targeting high risk populations. This includes investigations of the basic neurobiological, behavioral, and psychosocial mechanisms that underlie drug abuse and addiction; research to probe and break the connection between drug abuse and HIV infection; research to develop more effective approaches to pharmacological and behavioral treatments; research on the causes and consequences of drug abuse; health services research; and studies of the effects of drugs on women and children. Over two decades of research has shown us the true nature of addiction -- a brain disease that is expressed in behavioral ways in a social context.

The NIDA continues its efforts to find better ways to prevent and treat drug addiction. The NIDA remains committed to solving the pressing public health problems of drug abuse and addiction; problems that touch the lives of so many Americans.

Selected Achievements and Initiatives:

Receptor Cloning: NIDA-funded discoveries in molecular neurobiology have led to the identification and cloning of a receptor in the brain for every abused drug. The discovery of anandamide, an endogenous cannabinoid that binds to the THC receptor in the brain, enabled scientists to develop a potent antagonist that blocks this receptor. NIDA researchers using this antagonist have demonstrated (for the first time) physical dependence to marijuana in an animal model. The application of neuroimaging technologies to addiction research has enabled researchers to identify specific sites in the brain where drugs act and the long-term consequences of drug abuse.

NATIONAL INSTITUTE ON DRUG ABUSE

Developing Behavioral and Pharmacologic Treatments: Accomplishments in basic research have provided the foundation for developing effective behavioral and pharmacologic treatments. For years methadone and naltrexone were the only treatment medications available for opiate addiction. As a result of an intensive research effort by the NIDA, in 1993 the FDA approved LAAM as an effective alternative. The recent identification of the dopamine transporter as a cocaine receptor has elucidated how cocaine interacts with the neurotransmitter system, and revolutionized the NIDA's efforts to achieve one of its highest priorities: the development of an effective anti-cocaine medication. NIDA researchers also have shown that behavioral treatment can be highly effective; for example, significant improvements in treatment outcomes were achieved by rewarding patients for submitting cocaine-free urine samples.

Epidemiology Program: NIDA's epidemiology program addresses the critical public health problems inherent in the changing picture of drug abuse and addiction in the U.S. The NIDA has funded the annual "Monitoring the Future Survey" for over 20 years. In 1994, the percent of children who reported using marijuana increased for the third year in a row. This increase correlates with troubling changes in attitudes: a dramatic decrease in the perception of harmfulness, and a decrease in social disapproval of marijuana use. To address this alarming trend, NIDA grantees have provided the first evidence that regular classroom teachers can reduce tobacco, alcohol, and marijuana use among their students by conducting school-based, psychosocial intervention programs. This positive effect lasts through high school --the age youth are most at risk for initiating drug use.

Two critical areas of NIDA-funded AIDS research are injection drug use as a method of HIV transmission, and the impact of drug abuse on the already compromised immune systems of drug-abusing AIDS patients. NIDA research has demonstrated that drug abuse outreach and intervention programs are highly effective in reducing high-risk behaviors associated with the spread of HIV/AIDS. This is critical in light of evidence that shows injection drug abuse is the fastest growing vector for the spread of HIV. Researchers have also been identifying the effect of abused drugs on the progression of AIDS.

Appropriation History
($ in thousands)

FY 1993	$403,806 (+1.0%)
FY 1994	$425,201 (+5.3%)
FY 1995	$437,643 (+2.9%)
FY 1996	$457,617 (+4.7%)

Extramural Research Project Grants Supported

FY 1993	942
FY 1994	1,079
FY 1995 (Est.)	1,093

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	87%
FY 1994	87%
FY 1995 (Est.)	87%

Success Rate - Research Project Grants

FY 1993	32%
FY 1994	33%
FY 1995 (Est.)	21%

Research Training
(# of FTE's supported)

FY 1993	302
FY 1994	345
FY 1995 (Est.)	354

Full-Time Equivalent Employees

FY 1995 (Est.)	386

Research Centers Supported

FY 1995 (Est.)	38

NATIONAL LIBRARY OF MEDICINE

Address:
National Library of Medicine
National Institutes of Health
Building 38, Room 2E17B
8600 Rockville Pike
Bethesda, MD 20894

Director:
Donald A.B. Lindberg, M.D.
301-496-6221 (voice)
301-496-4450 (fax)
email: dl62h@nih.gov

Legislative Liaison:
Sally Burke
301-496-6491 (voice)
301-480-4971 (fax)
email:sally_burke@ccmail.nlm.nih.gov

Mission:
The world's largest biomedical library became a part of the National Institutes of Health in 1968. The early years of its 155-year history were spent as a resource for the U.S. military; it received its national mandate in 1956 when Congress passed the National Library of Medicine Act. The Library continues to serve as a vital link to the biomedical community's researchers, educators, and practitioners.

The Library's collections today number more than 5 million books, journals, audiovisuals, and historical materials. From primary responsibility for a physical collection, however, the Library's mission has been expanded over the years and today encompasses:

- Two major components involved in research and development, the Lister Hill National Center for Biomedical Communications and the National Center for Biotechnology Information;
- A program concerned with developing information resources in environmental health, toxicology, and hazardous substances;
- A program of extramural grants for library and information services and for research in medical informat ics; and
- A computer center that serves as the hub of an online international biomedical information network.

The Library's major database, MEDLINE, contains 8 million references and abstracts of the worldwide journal literature from 1966 to the present. Other databases, on cancer, AIDS, and health services research, for example, are produced in collaboration with other components of the NIH and PHS. This wealth of information is available through a 4,000 member National Network of Libraries of Medicine made up of hospitals, schools of the health sciences, academic institutions, private companies, and government agencies.

NATIONAL LIBRARY OF MEDICINE

It is also possible for individuals to tie directly into the NLM's databases using a personal computer. The Library not only provides the central database resource, but also the specialized microcomputer software ("Grateful Med") that makes this access easy and inexpensive. Seven million database searches are done each year on the NLM's system; many million more are done by users of privately produced MEDLINE CD-ROMs and at foreign institutions who enter into formal agreements with the NLM to provide service internationally. In addition, the Library provides a variety of information resources over the Internet, including a World Wide Web service.

Research and development conducted by the Library has resulted in a wide variety of advances in biomedical communications -- the original development of MEDLINE in the late 1960s, document preservation techniques, innovative methods of providing copies of journal articles to remote users, development of a prototype for a Unified Medical Language System, sophisticated databases and algorithms for searching gene sequences, and, most recently, projects related to telemedicine and to the development of an Electronic Patient Record.

The present challenge to the Library is in outreach to the biomedical community. That is, to ensure that all American health professions --scientists, practitioners, and students-- are aware of the opportunities to them for having rapid access to the wealth of medical information resulting from the nation's investment in biomedical and behavioral research.

Appropriation History
($ in thousands)

FY 1993	$113,031	(+14.1%)
FY 1994	$119,981	(+6.1%)
FY 1995	$128,694	(+7.3%)
FY 1996	$141,066	(+10.2%)

Extramural Grants

FY 1993	109
FY 1994	129
FY 1995 (Est.)	169

Extramural Grants and Contracts as a Percent of the Institute's Total Budget

FY 1993	25.8%
FY 1994	24.1%
FY 1995 (Est.)	24.1%

Research Training
(# of FTE's supported)

FY 1993	126
FY 1994	130
FY 1995 (Est.)	129

Full-Time Equivalent Employees

FY 1995 (Est.)	586

JOHN E. FOGARTY INTERNATIONAL CENTER

Address:
John E. Fogarty International Center
National Institutes of Health
Building 31, Room B2C08
31 Center Drive MSC 2220
Bethesda, MD 20892-2220

Director:
Philip E. Schambra, Ph.D.
301-496-1415 (voice)
301-402-2173 (fax)
email: pschambra@nih.gov

Legislative Liaison:
Linda Reck
301-496-1491 (voice)
301-594-1211 (fax)
email: lr9t@nih.gov

Mission:

The Fogarty International Center (FIC) was established in 1968 to advance health through international scientific cooperation and to serve as the organizational locus for the NIH's international activities. Congressman John Fogarty of Rhode Island, in whose memory the Center is named, envisioned "at Bethesda a great international center for research in biology and medicine dedicated to international cooperation and collaboration in the interests of the health of mankind."

In support of its mission to improve the health of the people of the United States and other nations through the promotion of international cooperation and advanced study in the biomedical sciences The FIC fosters research partnerships between U.S. scientists and foreign counterparts through grants, fellowships, exchange awards and international agreements.

Selected Achievements and Initiatives:

Vitamin A and HIV/AIDS: FIC studies, conducted in collaboration with the National Institute of Child Health and Human Development, suggest that maternal vitamin A deficiency contributes to mother-to-child transmission of HIV. Scientists studied 567 HIV-infected pregnant women, analyzed in four groups based on vitamin A concentrations. As maternal serum vitamin A concentrations fell, the rate of infection in their infants increased steadily, from 7% in the women with the highest vitamin A concentrations, to 32% in those mothers with the lowest. These findings may have significant implications for the development of cost-effective measures to reduce the risk of HIV from mother to child through nutritional intervention.

Down Syndrome and Leukemia: Down syndrome is one of the most common genetic disorders and is the most prevalent cause of mental retardation in the United States. Patients with Down syndrome disproportionately develop a number of diseases that are found in the general population, including leukemia and neural degeneration.

JOHN E. FOGARTY INTERNATIONAL CENTER

The gene for acute myelogenous leukemia (AML1) now has been located in a region of a human chromosome known to be involved in Down syndrome. FIC- supported research is now underway to determine the role of this gene in the malignant process. The information gained from this study should lead to a rational basis for treatment and prevention of leukemia associated with Down syndrome.

Tuberculosis and AIDS: Tuberculosis (TB) is the greatest cause of death in the world from any single infectious disease and is increasing worldwide. This is the result of the epidemic of HIV infection and the emergence of drug resistant strains of TB.

A randomized clinical trial involving symptom-free HIV-seropositive individuals demonstrated the efficacy of Isoniazid in decreasing the incidence of TB and delaying the onset of AIDS. These FIC-supported research findings suggest that Isonizaid prophylaxis should be considered for HIV-seropositive individuals and that this treatment may also be appropriate for tuberculosis-negative patients in areas where this disease is endemic.

Appropriation History
($ in thousands)

FY 1993	$19,733 (+0.7%)
FY 1994	$21,677 (+9.9%)
FY 1995	$23,775 (+9.7%)
FY 1996	$25,270 (+6.4%)

Extramural Research Project Grants Supported

FY 1993	280
FY 1994	230
FY 1995 (Est.)	273

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	64%
FY 1994	66%
FY 1995 (Est.)	69%

Success Rate - Research Project Grants

FY 1993	26%
FY 1994	27%
FY 1995 (Est.)	38%

Full-Time Equivalent Employees

FY 1995 (Est.)	76

NATIONAL CENTER FOR HUMAN GENOME RESEARCH

Address:
National Center for Human Genome Research
National Institutes of Health
Building 31 Room 4B09
9000 Rockville Pike
Bethesda, MD 20892

Director:
Francis S. Collins, M.D., Ph.D.
301-496-0844 (voice)
301-402-0837 (fax)
email: fc23@nih.gov

Legislative Liaison:
Kathy Hudson, Ph.D.
301-402-0955 (voice)
301-402-0837 (fax)
email:
kathyh@od.nehgr.nih.gov

Mission:
The Human Genome Project is an historic, international research effort that has the goal of analyzing the structure of human DNA and determining the location and sequence of the estimated 100,000 human genes that constitute the human blueprint. The Project evolved from decades of fundamental science research. It is providing researchers with a host of powerful tools and resources to search rapidly and efficiently for disease genes and solve many difficult mysteries of biology and medicine. The resulting acceleration in the pace of gene discovery has been dramatic, with frequent reports in the press of the identification of genes involved in a number of important diseases. The identification of the genetic basis of a wide array of diseases will profoundly change the practice of medicine. Disease gene identification leads to diagnostic tests for individuals at risk, which can open the door to effective preventive medicine measures, and ultimately to new cures from innovative drug therapy or gene therapy approaches. In many other ways, the Human Genome Project will provide a powerful stimulus for the biotechnology industry, and radically alter the future of biomedical research. The National Institutes of Health and the Department of Energy are the key agencies managing this project in the United States.

The National Center for Human Genome Research (NCHGR) was established in 1989 to lead the National Institutes of Health's effort in the Human Genome Project. The NCHGR's Division of Extramural Research funds Human Genome Project research in laboratories throughout the country. Research in genetic and physical mapping, DNA sequencing, database development, technology development for genome research, and studies of the ethical, legal, and social implications of genetics research are supported by the extramural arm of the NCHGR. In February 1993, the NCHGR expanded its role at the NIH with the establishment of the Division of Intramural Research, focused on applying genome technologies to finding disease genes and developing DNA-based diagnostics and gene therapies. This new Division will serve as a hub for human genetics research at the NIH, including studies to identify specific genes and studying their function in health and disease.

NATIONAL CENTER FOR HUMAN GENOME RESEARCH

Selected Achievements and Initiatives:

Mapping Goal Achieved: In FY 1994 the first goal of the Human Genome Project was achieved with the publication of an integrated human genetic linkage map that was even more detailed than the one envisioned at the beginning of the Project. The initial goal of constructing a human genetic map consisting of about 2,000 randomly-spaced markers was exceeded with the construction of an integrated map comprised of over 5,000 markers. This genetic map is an important research tool in locating genes.

Disease Gene Identification: Errors in genes are responsible for an estimated 3,000 to 4,000 clearly hereditary diseases, including Huntington's disease, cystic fibrosis, neurofibromatosis, Duchenne muscular dystrophy, and many others. In addition, altered genes are now known to play a role in cancer, heart disease, diabetes, and many other common diseases. Using tools developed by the Human Genome Project, research teams have identified genes involved in a number of serious genetic diseases, including breast cancer, ovarian cancer, colon cancer, and cystic fibrosis. These examples provide testimony to how the Human Genome Project is transforming biomedical research and medicine.

Cancer Studies Consortium: The Ethical, Legal and Social Implications Branch, along with several other NIH institutes, funded 11 three-year research projects that will examine issues surrounding testing and counseling for heritable breast, ovarian, and colon cancer risks. These studies will gather evidence about testing and counseling for genetic predispositions to cancer, the interest and demand for testing, the impact of testing, and alternative ways to provide such services.

Appropriation History
($ in thousands)

FY 1993	$106,239 (+14.1%)
FY 1994	$128,701 (+21.1%)
FY 1995	$152,849 (+18.8%)
FY 1996	$169.584 (+11.2%)

Extramural Research Project Grants Supported

FY 1993	221
FY 1994	187
FY 1995 (Est.)	198

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	94.7%
FY 1994	79.8%
FY 1995 (Est.)	69.4%

Success Rate - Research Project Grants

FY 1993	27.9%
FY 1994	27.6%
FY 1995 (Est.)	19.1%

Research Training
(# of FTE's supported)

FY 1993	170
FY 1994	166
FY 1995 (Est.)	123

Full-Time Equivalent Employees

FY 1995 (Est.)	196

Research Centers Supported

FY 1995 (Est.)	14

NATIONAL CENTER FOR RESEARCH RESOURCES

Address:
National Center for Research Resources
National Institutes of Health
Building 12A, Room 4007
12 South Drive, MSC 5662
Bethesda, MD 20892-5662

Director:
Judith L. Vaitukaitis, M.D.
301-496-5793 (voice)
301-402-0006 (fax)
email: vaitukaitis@nih.gov

Legislative Liaison:
Barbara N. Perrone
301-435-0866 (voice)
301-480-3654 (fax)
email: barbp@ep.ncrr.nih.gov

Mission:
The National Center for Research Resources' (NCRR) mission is to be a "catalyst for discovery" for NIH-supported investigations throughout the nation by providing a broad range of technologies and resources that enable research to thrive. The NCRR supports primary research to create and develop these critical resources and technologies, promotes resource sharing and collaborations within and across scientific disciplines, and provides quick, flexible approaches to new and emerging needs of both biomedical and behavioral investigators. NCRR support is in four areas: biomedical technology, clinical research, comparative medicine, and research infrastructure.

Biomedical Technology: Biomedical Technology supports research, development, and access to sophisticated technologies at biomedical technology resource centers and grants for acquisition of new state-of-the-art shared instrumentation. Current areas of emphasis include high performance computing, molecular and cellular structural biology technologies, biomedical engineering, noninvasive imaging and spectroscopy, mathematical modeling and computer simulations.

Clinical Research: A national network of centers for interdisciplinary, shared clinical resources is available for research into the prevention, diagnosis and treatment of disease. These centers are in hospitals in academic medical centers and provide investigators with cost-effective, centralized access to research facilities, research nurses and dieticians, and specialized research services. Other emphases include junior career development for physicians and dentists in clinical research, and national laboratories to produce vectors for gene therapy.

Comparative Medicine: Comparative Medicine provides high quality, disease-free models and specialized research facilities, such as Regional Primate Research Centers. Research support is available for the development of a wide-range of research models, including marine invertebrates and lower vertebrates, and to provide access to an array of important biological materials such as viruses, bacteria and fungi, as well as cell lines and genetic materials. Support also includes training and career development in comparative medicine; a repository of genetically altered animals; and breeding of scarce research animals.

NATIONAL CENTER FOR RESEARCH RESOURCES

Research Infrastructure: Infrastructure addresess the under-representation of minority investigators; enhances the research environment at minority colleges and universities that award doctoral degrees in the health sciences; improves biomedical and behavioral research facilities through matching grants for construction and renovation; increases the pool of minority high school students interested in science careers; enhances K-12 science teacher education and skills; and improves pre-college science education and the public's understanding of science.

Selected Achievements and Initiatives:

Breast Cancer Susceptibility Gene: Researchers at a General Clinical Research Center recently identified a breast cancer susceptibility gene, BRCA1, which has immediate implications for early diagnosis of breast cancer and possibly other types of cancer.

Osteoporosis: A clinical trial demonstrated that slow-release sodium fluoride with calcium citrate administered for four years both halts and reverses osteoporosis, preventing new spinal fractures and building strong, new bone, without hazardous side effects.

SIV: Researchers at the University of Washington Regional Primate Research Center, the National Institutes of Health, and Gilead Sciences reported that an experimental drug called PMPA given to 25 macaque monkeys up to a day after they were exposed to simian immunodeficiency virus (SIV), an HIV-like monkey virus, safely blocked all traces of infection in these animals.

Magnetic Resonance Imaging: Magnetic resonance imaging (MRI) is a diagnostic and therapeutic evaluation tool in medicine has evolved with significant support from NCRR Biomedical Technology shared resources. MRI images the interior of the human body in exquisite detail, often to half millimeter resolution in thin planes or sections. At least three areas are becoming more important: MRT (magnetic resonance therapy), functional MRI, and MRS (MR spectroscopy). MRT is a technique that surgeons can use to perform operations within an MR system while watching actions on a display in real time. Functional MRI permits improved understanding of brain function and organization. With MRS it is possible to examine the specific molecular activity of the body to determine deficiencies in skeletal muscle myopathies or the rejection status of a transplanted organ.

Appropriation History
($ in thousands)

FY 1993	$312,468	(-0.6%)
FY 1994	$331,915	(+6.2%)
FY 1995	$349,367	(+5.2%)
FY 1996	$384,470	(+11.5%)

Extramural Research Project Grants Supported

FY 1993	438
FY 1994	478
FY 1995 (Est.)	525

Extramural Research as a Percent of the Institute's Total Budget

FY 1993	95.5%
FY 1994	95.8%
FY 1995 (Est.)	95.5%

Success Rate - Research Project Grants

FY 1993	28.4%
FY 1994	18.0%
FY 1995 (Est.)	23.0%

Research Training
(# of FTE's supported)

FY 1993	80
FY 1994	76
FY 1995 (Est.)	76

Full-Time Equivalent Employees

FY 1995 (Est.)	100

Research Centers Supported

FY 1995 (Est.)	198

WARREN G. MAGNUSON CLINICAL CENTER

Address:
Warren G. Magnuson
Clinical Center
National Institutes of Health
Building 10, Room 2C146
10 Center Drive, MSC 1504
Bethesda, MD 20892-1504

Director:
John I. Gallin, M.D.
301-496-4114 (voice)
301-402-0244 (fax)
email: jgallin@nih.gov

Legislative Liaison:
Sahira Rafiullah
301-496-5939 (voice)
301-402-0244 (fax)
email: sahi@nih.gov

Mission:
The Warren G. Magnuson Clinical Center (WMCC) is the clinical research facility of the National Institutes of Health. As a national resource, it provides the patient care, services, and environment needed to initiate and support the highest quality training in, and conduct of, clinical research. The Clinical Center's mission is to provide protocol-specific patient care and training in support of the intramural clinical research programs sponsored by the individual institutes of the NIH.

The Clinical Center is the world's largest hospital devoted exclusively to clinical investigation. Research participants consent to participate in clinical investigative studies (protocols) and are treated without charge. Unlike most hospitals, the Clinical Center does not offer general diagnostic or emergency treatment services. Admission is selective: patients are chosen by institute physicians solely because they have an illness under study by those institutes and meet the specific entry criteria for a protocol.

A unique feature of the Clinical Center is the close proximity of laboratories and patients, often separated only by the width of a hospital corridor. Advances realized in the laboratory are brought to the bedside, and new areas for laboratory investigation are suggested by the health care team's observations of patients. Opened in 1953, the Clinical Center was specially designed to foster this exchange of information between basic scientists and clinicians. Many NIH clinicians are themselves outstanding scientists. Basic scientists in more than 1,600 laboratories work side-by-side with clinicians caring for patients.

The Clinical Center's vision is to maintain its reputation as an international model for excellence and innovation by training tomorrow's clinical investigators and conducting cutting-edge clinical research. Currently, plans are being considered for construction of a new building to allow for the continuation of biomedical research at the NIH into the 21st century.

WARREN G. MAGNUSON CLINICAL CENTER

Selected Achievements and Initiatives:

Gene Therapy: When researchers from the National Heart, Lung, and Blood Institute and the National Cancer Institute were designing the protocol for the first human gene therapy studies, investigators asked the Clinical Center Department of Transfusion Medicine (DTM) to devise a sterile process for collecting and growing cells, inserting human genes into them, and reinfusing them into the patient. Cells manufactured for human use must match safety and purity requirements already applied by the Food and Drug Administration to blood products. DTM is setting the industry standard for product safety and purity as well as worker safety. DTM is negotiating a cooperative research and development agreement with a pharmaceutical company to maintain a core lab for cell processing, expansion, and gene therapy. Such a lab would apply state-of-the-art science to develop reagents and procedures for new cellular therapies.

Post-Transfusion Hepatitis: The Clinical Center Department of Transfusion Medicine has also been engaged in prospective studies for post-transfusion hepatitis since the 1960's. These studies have continuously defined the risk of transfusion-associated hepatitis (TAH) and have related that risk to characteristics of the donor population and to a series of interventions aimed at risk reduction. In collaboration with other NIH institutes, these studies have contributed to the discovery of the hepatitis B virus, the adoption of a hepatits B screening assay and the demonstration that such testing has led to the virtual eradication of transfusion-associated hepatitis B. Additionally, these prospective studies led to the recognition that the major cause of TAH was an agent distinct from the established hepatitis viruses, A and B. The NIH studies demonstrated not only that such an agent existed, but also that it was a major cause of chronic liver disease, including cirrhosis and liver cell cancer. The NIH studies further documented that the hepatitis C virus was the predominant cause of hepatitis C and that donor screening tests for this agent could prevent 90% of TAH. Such tests were placed into routine donor screening in 1990. Recently, a collaboration with Genelabs Technologies, Inc., and CDC has resulted in the cloning of a new agent, designated hepatitis G virus (HGV). NIH studies are in progress to develop a donor screening assay for this agent.

Research Training

(# of FTE's supported)

FY 1993	23
FY 1994	17
FY 1995	17

Employees

FY 1995	2,023

OFFICE OF AIDS RESEARCH

Address:
Office of AIDS Research
National Institutes of Health
Building 31, Room 4C02
31 Center Drive, MSC 2340
Bethesda, MD 20892

Director:
William E. Paul, M.D.
301-496-0357 (voice)
301-496-4843 (fax)
email: wepaul@nih.gov

Legislative Liaison:
Wendy Wertheimer
301-496-0357 (voice)
301-496-4843 (fax)
email: wendyw@nih.gov

Mission:

The NIH Office of AIDS Research (OAR) coordinates the scientific, budgetary, legislative, and policy elements of the NIH AIDS research program. Congress provided broad new authorities to the OAR to fulfill these responsibilities in the NIH Revitalization Act Amendments of 1993. The law mandates the OAR to develop an annual comprehensive plan and budget for all NIH AIDS research, and to prepare a Presidential bypass budget. A single appropriation for all AIDS research is provided to the OAR for distribution of funds to the institutes, centers, and divisions of the NIH, based on the objectives and priorities of the comprehensive plan. The law authorizes OAR to evaluate the AIDS research activities of the NIH. Utilizing the expertise of non-government scientists and AIDS community representatives, OAR has undertaken a major evaluation initiative to review and assess each of the components of the NIH AIDS research endeavor to determine whether those components are appropriately designed and coordinated to answer the critical scientific questions to lead to better treatments, prevention, and a cure for AIDS. The OAR administers an emergency discretionary fund, and supports the Intramural AIDS Targeted Antiviral Program (IATAP), the Protein Expression Laboratory, and the NIH AIDS Research Loan Repayment Program (LRP). The OAR Advisory Council was established by law to provide expert advice to the Director of OAR. The Council, composed of non-government experts from a broad array of scientific disciplines as well as AIDS community representatives, will review the annual plan, budget requests, and discretionary fund disbursements.

OFFICE OF AIDS RESEARCH

Selected Achievements and Initiatives:

Planning: OAR annually develops a comprehensive plan and budget for NIH AIDS research, inviting the participation of scientific experts from academia, industry, and foundations as well as AIDS community representatives. Through this process a consensus is developed regarding the direction and priorities for AIDS research, allowing OAR to eliminate unnecessary or outdated programs, streamline the research portfolios, and redirect limited resources to those areas with greater scientific promise for the ultimate prevention and cure. At the White House Summit on AIDS, held December 6, 1995, President Clinton asked Dr. William Paul, director of the OAR, to chair a working group charged with developing a coordinated plan and budget for HIV and AIDS research across every department of the government.

Evaluation: OAR has initiated a major evaluation of all NIH AIDS research. The evaluation group, including Nobel laureates, members of the National Academy of Sciences, internationally recognized scientists, industry leaders, and community representatives, is reviewing and assessing each of the components of the NIH AIDS research endeavor to determine whether those components are appropriately designed and coordinated to answer the critical scientific questions to lead to better treatments, prevention, and a cure for AIDS.

OAR has established six trans-NIH Coordinating Committees to encourage collaboration and coordination and to assist in the planning and budget processes. Committees were established in the following areas of HIV-related research: natural history and epidemiology; etiology and pathogenesis; therapeutics; vaccines; behavioral and social science research; and information dissemination.

OFFICE OF THE DIRECTOR

Congress has created a number of Offices within the Office of the Director of the National Institutes o Health. These Offices give special focus to important ares of public concern and help coordinate trans- institute initiatives.

OAM

OFFICE OF ALTERNATIVE MEDICINE

Address:

Office of Alternative Medicine
National Institutes of Health
Executive Plaza South
6120 Executive Boulevard,
Suite 450
Rockville, MD 20892-9904

Director:

Wayne B. Jonas, M.D.
301-496-7790 (voice)
301-402-4741 (fax)
email: wj18w@nih.gov

Legislative Liaison:

Lynwood Corbett
301-594-2693 (voice)
301-402-4741 (fax)
email: lc40u@nih.gov

Mission:

The Office of Alternative Medicine's (OAM) mission is to evaluate and investigate complementary, alternative, and unconventional medical practices using appropriate, high quality scientific methods; to coordinate and facilitate research and research training activities in these areas; and to disseminate that information to the public.

Selected Achievements and Initiatives:

The Office of Alternative Medicine is funding two Clinical Research Centers that provide training and funding for small pilot studies evaluating alternative medicine therapies. The Center for Alternative Medicine Research in HIV/AIDS is located at Bastyr University in Seattle, Washington, and the Center for Substance Abuse and Its Health Complications is located at the Minneapolis Medical Research Foundation in Minneapolis, Minnesota. For fiscal years 1993 and 1994, the OAM also provided grant awards to forty-two researchers in seven alternative medicine categories. Each grant award was for approximately $30,000.

OFFICE OF BEHAVIORAL AND SOCIAL SCIENCES RESEARCH

Address:
Office of Behavioral and
Social Sciences Research
National Institutes of Health
Building 1, Room 326
9000 Rockville Pike
Bethesda, MD 20892

Director:
Norman B. Anderson, Ph.D.
301- 402-1146 (voice)
301- 402-1150 (fax)
email:
norman_anderson@nih.gov

Legislative Liaison:
Virginia S. Cain, Ph.D.
301- 402-1146 (voice)
301- 402-1150 (fax)
email: virginia_cain@nih.gov

Mission:

The Director of the Office of Behavioral and Social Sciences Research (OBSSR) is the principal staff advisor to the NIH Director on matters concerning behavioral and social sciences research. The OBSSR provides leadership and direction in the development, refinement and implementation of a trans-NIH plan to increase the scope and support of behavioral and social sciences research and is responsible for coordinating the development of the NIH policies, goals and objectives in this field. The Office serves as a liaison between the NIH intramural and extramural communities, the federal agencies, academic and scientific societies, national volunteer health agencies, the biomedical research community, the media and the general public on matters pertaining to behavioral and social sciences research. Specifically, the OBSSR is responsible for:

(1) Advising the NIH Director and other key officials on matters relating to research on the role of human behavior and social processes in the promotion of health and prevention of disease;

(2) Fostering research projects in the behavioral and social sciences conducted or supported by the NIH institutes and centers (ICs);

(3) Identifying research projects that should be conducted or supported by the ICs; and

(4) Developing such projects in cooperation with the ICs.

Selected Achievements and Initiatives:

Because OBSSR is a new office there is little to report by way of recent achievements or initiatives. However, in May, the office announced the availability of funds to support research-related activities in the fields of psychology, sociology, anthropology, economics, behavioral medicine, and social-behavioral epidemiology. A total of $1.75 million was set aside to co-fund and administratively supplement NIH grants and to provide support for conferences. A total of 150 applications were received and reviewed. Of these, OBSSR funded 23 research grants and 10 conference grants that involved 16 NIH institutes and centers. The projects ranged from basic animal research to edipemiological studies.

Planned current activities include developing a uniform definition of behavioral and social sciences research and preparing a mandated report to Congress on the status of behavioral and social sciences research funding at the NIH. The Office will also work with the intramural and extramural scientific community to develop a strategic plan for the Office to help guide future funding decisions and other activities.

OFFICE OF DISEASE PREVENTION

Address:
Office of Disease Prevention
National Institutes of Health
Building 1, Room 260
1 Center Drive MSC 0174
Bethesda, MD 20892-0174

Director:
William R. Harlan, M.D.
301- 496-1508 (voice)
301- 402-2517 (fax)
email:
harlanw@oditmi.od.nih.gov

Legislative Liaison:
Diane Wax
301-496-3471 (voice)
301-496-0840 (fax)
email:
waxd@odl+ml.od.nih.gov

Mission:

The Office of Disease Prevention (ODP) advises the NIH Director and all NIH components in planning, developing, and reviewing policies and guidelines, including legislative and public policy actions, for the NIH disease prevention programs and activities that improve the nation's health through research, training, exchange of knowledge, and public education. The Office is also responsible for coordinating prevention research and health promotion activities between the NIH and other federal agencies and with other public and private entities. In addition to the NIH Worksite Health Promotion Program, there are four other offices within the ODP:

The Office of Medical Applications of Research (OMAR) is the focal point for health technology assessment and transfer activities at the NIH. A major responsibility of OMAR is the coordination of the NIH Consensus Development Program, through which medical technologies are assessed by non-advocate, non-federal panels of experts with input from specialists in the field, health care providers, and consumers. The results of these conferences are disseminated widely.

The Women's Health Initiative (WHI) is the largest prevention study of its kind and was initiated by the NIH in 1991 to address health issues regarding the three most common causes of death, disability, and impaired quality of life in postmenopausal women -- cardiovascular disease, cancer, and osteoporosis. The studies have three major components: a randomized, controlled clinical trial of promising but unproven approaches to prevention; an observational study to identify predictors of disease; and a study of community approaches to developing healthful behaviors.

The Office of Rare Disease Research (ORDR) provides information on and stimulates research by the NIH on rare diseases. A centralized data base on rare diseases and conditions is being developed to assist in linking research investigators with potential clinical research participants. An annual report to Congress highlights research activities sponsored by the NIH dealing with rare diseases or conditions.

The Office of Dietary Supplements Research (OSP) coordinates across NIH institutes on the health affects of dietary supplements. The director advises federal health agencies regarding dietary supplements and works with the private sector to foster research and evaluation of dietary supplements.

OFFICE OF DISEASE PREVENTION

Selected Achievements and Initiatives:

Office of Disease Prevention: The investment in prevention-related research supported by the institutes has increased over the past eight years to approximately 26% of the NIH research budget. There is increased collaboration among institutes on shared research issues and with the private sector. Detailed information on institute programs and financial support for prevention research is available from the Office of Disease Prevention.

Women's Health Initiative: The Clinical Trial/Observational Study portion of the Women's Health Initiative (WHI) is proceeding on schedule, with 40 clinical centers recruiting participants. More than 148,000 screening visits have been conducted, and 12,280 women have been randomized to the clinical trial. In addition, 9,848 women have been enrolled in the Observational Study.

Recent Consensus Conferences with Important Implications:

Helicobacter Pylori in Peptic Ulcer Disease recommended that the use of antibiotics in combination with acid-reducing drugs, known as H2 blockers, can effectively cure the disease in many patients.

The Effect of Corticosteroids for Fetal Maturation on Perinatal Outcomes concluded that prenatal administration of corticosteroids is extremely effective in preventing complications of premature birth and recommended that all women between 24 and 34 weeks of pregnancy who enter premature labor be given this treatment.

Optimal Calcium Intake concluded that many people are not getting enough calcium in their diets and recommended that all Americans strive to consume optimal levels of calcium to build strong bones and reduce the risk of osteoporosis.

OFFICE OF RESEARCH ON MINORITY HEALTH

Address:
Office of Research on
Minority Health
National Institutes of Health
Building 1, Room 260
1 Center Drive MSC 0164
Bethesda, MD 20892-0164

Director:
John Ruffin, Ph.D.
301-402-1366 (voice)
301-402-2517 (fax)
email: john_ruffin@nih.gov

Legislative Liaison:
Margaret Broadaway
301-402-2516 (voice)
301-402-2517 (fax)
email:
margaret_broadaway@nih.gov

Mission:

The Office of Research on Minority Health (ORMH) serves as the focal point for coordinating overall NIH policies and programs for increasing the level and scope of research on health problems that disproportionately affect minorities, and expanding the participation of minorities in biomedical and behavioral research careers. The Office works in partnership both with grassroots organizations in minority communities and with the scientists and program experts in the NIH institutes, centers and divisions (ICDs). The ORMH does not offer research or research training support directly to the community. Rather, it supports studies and programs as pilot projects managed by the ORMH's partner ICDs. Projects that receive support are subject to rigorous scientific scrutiny and to ongoing assessment. It is intended that projects that demonstrate effectiveness will ultimately become part of the partner ICD's research portfolio, freeing ORMH funds to support new pilot projects in other areas of need.

Selected Achievements and Initiatives:

A Collaborative Clinical/Pharmacologic Research Study of New Chemotherapy Agents Against Metastatic Prostate Cancer: This project is establishing, with ORMH funds, a collaborative arrangement between the Clinical Pharmacology Branch (CPB) of the National Cancer Institute (NCI) and the Department of Pharmacology at the Howard University Medical Center, to bring state-of the-art chemotherapy programs to Black American males treated at the Howard Medical Center. Metastatic prostate cancer appears to be more virulent in minority populations in the United States, and, according to some reports, is associated with reduced survival in Black American males, in particular. These funds will help establish active treatment programs at Howard, with the help and guidance of personnel within the National Cancer Institute. Selected treatment protocols that appear to have promise in metastatic prostate cancer (based on data from the CPB, NCI) will be converted to a format that will allow drug administration at the "community hospital" level.

OFFICE OF RESEARCH ON MINORITY HEALTH

Diabetes --- Genetics, Treatment, and Prevention in Minorities: Under this initiative, the ORMH and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) have been working jointly since 1994 to promote the health of minority populations through research on the genetics of diabetes and on diabetes treatment and prevention in minority populations. ORMH provided funding in FY 1994 to start-up a number of diabetes gene research grants of potential relevance to understanding the basis of diabetes in minority populations. In FY 1995 and 1996, the ORMH will be contributing to sustaining an NIDDK effort to develop treatment and prevention interventions for diabetes in minorities.

Bridges to the Future Program: In 1992, the ORMH, and the National Institute of General Medical Sciences (NIGMS) established the Bridges Program, which was designed to increase the opportunities for students who are members of underrepresented minority populations to enter careers in research in the biomedical sciences. The Bridges Program targets two different underrepresented minority student populations: (1) those in colleges and universities offering only Master of Science (M.S.) degree programs in biomedical sciences, wanting to transfer into research intensive, Ph.D.-granting institutions; and (2) those in two-year junior or community colleges, wanting to transfer into baccalaureate institutions. The Bridges Program is administered by staff in NIGMS using funds provided by the ORMH.

The NIGMS will be conducting an assessment of the program during FY 1996. An Electronic Student Tracking and Reporting (E-STAR) system has been established to simplify data collection and analysis. E-STAR will allow both NIGMS and its grantees access to a common datafile using the Internet and a world-wide web browser.

OFFICE OF RESEARCH ON WOMEN'S HEALTH

Address:
Office of Research on
Women's Health
National Institutes of Health
Building 1, Room 201
9000 Rockville Pike
Bethesda, MD 20892

Director:
Vivian W. Pinn, M.D.
301-402-1770 (voice)
301-402-1798 (fax)
email: vp3w@nih.gov

Legislative Liaison:
Debbie M. Jackson
301-402-1770 (voice)
301-402-1798 (fax)
email: jacksond@NIH.GOV

Mission:
The Office of Research on Women's Health (ORWH) serves as a focal point for women's health research at the NIH by setting and monitoring policy, promoting the development and expansion of women's health research, and enhancing scientific career opportunities. The ORWH works in partnership with the NIH institutes, centers, and divisions to ensure that women's health research becomes an integral part of the scientific fabric at the NIH and throughout the scientific community. The ORWH has a threefold mandate:

- to strengthen and enhance research related to diseases, disorders, and conditions that affect women and to ensure that research conducted and supported by the NIH adequately addresses issues regarding women's health;
- to ensure that women are appropriately represented as subjects in biomedical and behavioral research studies supported by the NIH; and
- to develop opportunities and support for recruitment, retention, re-entry, and advancement of women in biomedical careers.

Over the past five years, major responsibilities of the ORWH have grown to include determination of an agenda for women's health research; serving as co-director of the Women's Health Initiative; responding to inquiries about women's health research and NIH policies from the scientific and advocacy communities as well as from women and their families; further addressing the legal and ethical issues that must be considered in efforts to increase the inclusion of women as subjects in clinical research; and collaborating with the Health Resources and Services Administration (HRSA), the Public Health Service Office of Women's Health (OWH), and the Association of American Medical Colleges (AAMC) in determining the content of women's health in medical school curricula.

OFFICE OF RESEARCH ON WOMEN'S HEALTH

The NIH Revitalization Act of 1993, which legislatively mandated ORWH, also included language directing expansion of the NIH policies for the inclusion of women and minorities as subjects in clinical research. The ORWH has the responsibility of assisting in the implementation of revised policies of inclusion in NIH-supported research, and is charged with the development of a tracking system to monitor the inclusion of women in clinical research.

The ORWH also addresses issues of importance to recruiting and retaining women, especially those of diverse backgrounds into NIH-supported clinical studies, and to identifying proven and innovative techniques to assist investigators.

Selected Achievements and Initiatives:

The ORWH stimulates new research and expands previously existing research studies to better define health and disease in women. Many ORWH-supported studies will benefit both men and women through a focus on understanding the role of gender in biological and psychological processes. The ORWH accomplishes its research mission through administrative supplements to ongoing NIH-funded investigations, through the co-funding of new research initiatives, and through research planning conferences and workshops. All efforts are done by collaborative funding with the institutes, centers, and divisions of the NIH.

In FY 1995, some of the special research initiatives supported in collaboration with the NIH institutes included such topics as aging, genetics, the environment, breast cancer, autoimmune disease, urologic health, cardiovascular diseases, diabetes and the mental health of women. In FY 1995, the ORWH also provided administrative supplements to 84 ongoing research projects to enhance the recruitment and retention of populations such as rural and minority women, or to enhance biomedical and behavioral research. The ORWH continually updates and refines its agenda and priorities through consideration of new scientific advances.

NIH-SPEAK: A GLOSSARY OF NIH TERMS

Activity Code: A code assigned by the NIH to identify groupings of support mechanisms. General categories include research grants, contracts, training, and fellowships. Research grants are further subdivided into research projects, research centers, and other research grants. Each of those subdivisions is further divided.

Application: A formal request for support of a specific project or activity.

Award: A project or activity to which funds have been obligated.

Biomedical Research and Development Price Index (BRDPI): The BRDPI (pronounced "bird-pie") is developed annually for the NIH to measure changes in the prices of item and services for its sponsored research and development activities.

Competing Continuation Sometimes called a "competing renewal," a competing continuation is an application for continued support of a project. It requires competitive peer review and institute/center action to continue to receive funding beyond its current grant period.

Direct Cost: The budgetary component of an award consisting of itemized equipment, personnel, travel, and other expenses necessary to carry out a research project. (*See indirect cost, total cost*).

Extramural (Award, Grant): Funds provided by the National Institutes of Health to organizations outside of the NIH.

FIRST Award (R29): First Independent Research Support and Transition Award. Intended to provide a sufficient initial period of research support for newly independent biomedical investigators to develop their research capabilities and demonstrate the merit of their research ideas.

Indirect Cost: The budgetary component of an award provided to help defray costs of institutional overhead and grant administration. The amount of indirect cost awarded is usually derived from the "indirect cost rate," a pre-negotiated percentage of the direct cost award. Not all research grant mechanisms are eligible for indirect cost reimbursement. (*See direct cost, total cost.*)

Intramural Program: Research conducted by employees of the NIH.

Mechanisms: See Activity Codes.

MERIT Award (R37): Method to Extend Research in Time Award. Grants designed to provide long-term support to investigators whose research competence and productivity are distinctly superior and who are likely to continue to perform in an outstanding manner. Candidates are identified during the normal grant review process. Investigators may not apply for a MERIT award.

New (Application, Award, Grant): Refers to an application that has not received prior funding.

Non-Competing Continuation: A year of continued support for an existing grant that has been funded previously. Applications for this continued support do not undergo peer review, but are administratively reviewed and are funded based on a prior award commitment.

NIH-SPEAK: A GLOSSARY OF NIH TERMS

National Research Service Award (NRSA): Awards either to individuals or institutions to provide research training.

Percentile Rank: The percentage of reviewed applications with priority scores equal to or better than the particular application under review. Percentile rank is usually based on all the applications reviewed within a given study section in three consecutive meetings.

Principal Investigator (PI): The grant applicant who is responsible for the scientific and technical direction of a project and in whose name the grant application is submitted.

Priority Score: The score assigned an application by an initial review group (study section). The score is a quantitative indicator of scientific and technical merit that ranges from 100 (of highest merit) to 500 (of lowest merit).

R01: An activity code assigned by the NIH to identify the traditional research project award. The award is intended to support a discrete, specified, circumscribed project.

R29: See FIRST Award.

Renewal: See Competing Continuation.

Research Centers: Research center grants support multidisciplinary, long-term research and development programs at research centers, usually associated with outside institutions. Research centers usually have a clinical orientation.

Research Project Grants (RPG): Primarily investigator-initiated, basic scientific research grants. Such grants may be assigned a variety of activity codes, such as R01, R29, P01, U01, etc.

SBIR Award: Small Business Innovative Research Award. A grant program designed to support projects that may have commercial viability.

Study Section: An Initial Review Group (IRG), usually within the NIH Division of Research Grants, composed of experts from a defined discipline charged with the review and rating by priority score and percentile ranking of research grant applications on the basis of scientific and technical merit.

Success Rate: The percentage of reviewed applications that receive funding. It is computed by dividing the number of competing applications funded by the sum of applications reviewed and applications eliminated during triage. Applications that have one or more amendments in the same fiscal year are counted only once in the success rate computation.

Supplemental: A request for additional funds, either for the current operating year or for any future year whose funding had previously been committed, usually for an expansion of the project's scope or to meet unforseen costs.

Total Cost: The sum of the direct cost and the indirect cost of the research.

Training: Training awards support the research training of scientists for careers in the behavioral and biomedical sciences. Training awards consist of institutional training grants and individual fellowships.

Triage: The process of eliminating from further review those submitted applications judged to be of noncompetitive quality.

Sources: A variety of NIH Division of Research Grants' publications and the PHS Grants Policy Statement

AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

The Ad Hoc Group for Medical Research Funding is a voluntary coalition of nearly 200 organizations dedicated to the future of biomedical and behavioral research. Members of the Ad Hoc Group determine on a project-by-project basis whether to participate in any given activity. The following organization's have agreed to participate in the preparation of the *NIH: A Resource Guide.*

Academy of Radiology Research
AIDS Action Council
Alliance for Aging Research
Alliance for Eye and Vision Research
Alzheimer's Association
Ambulatory Pediatric Association
American Academy of Allergy, Asthma & Immunology
American Academy of Child & Adolescent Psychiatry
American Academy of Dermatology
American Academy of Medical Acupuncture
American Academy of Neurology
American Academy of Ophthalmology
American Academy of Optometry
American Academy of Orthopaedic Surgeons
American Academy of Otolaryngology--Head and Neck Surgery
American Academy of Pediatrics
American Association for Cancer Research
American Association for Dental Research
American Association of Anatomists
American Association of Colleges of Nursing
American Association of Colleges of Osteopathic Medicine
American Association of Colleges of Pharmacy
American Association of Dental Schools
American Association of Pharmaceutical Scientists
American Cancer Society
American College of Cardiology
American College of Chest Physicians
American College of Clinical Pharmacology
American College of Medical Genetics
American College of Neuropsychopharmacology
American College of Rheumatology
American Dental Association
American Diabetes Association
American Federation for Clinical Research
American Foundation for AIDS Research
American Gastroenterological Association

AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

American Geriatrics Society
American Heart Association
American Institute of Nutrition
American Lung Association
American Nurses Association
American Optometric Association
American Pediatric Society
American Physiological Society
American Podiatric Medical Association
American Psychiatric Association
American Psychological Association
American Psychological Society
American Society for Bone & Mineral Research
American Society for Cell Biology
American Society for Clinical Nutrition
American Society for Clinical Pharmacology and Therapeutics
American Society for Hematology
American Society for Microbiology
American Society for Pharmacology and Experimental Therapeutics
American Society for Reproductive Medicine
American Society for Therapeutic Radiology and Oncology
American Society for Virology
American Society of Addiction Medicine
American Society of Animal Science
American Society of Clinical Oncology
American Society of Hematology
American Society of Human Genetics
American Society of Nephrology
American Society of Tropical Medicine and Hygiene
American Speech-Language-Hearing Association
American Veterinary Medical Association
American Urological Association
Arthritis Foundation
Association for Behavioral Sciences & Medical Education
Association for Medical School Pharmacology
Association for Research in Vision and Ophthalmology
Association of Academic Chairmen in Plastic Surgery
Association of Academic Health Centers
Association of American Cancer Institutes
Association of American Medical Colleges
Association of American Universities
Association of American Veterinary Medical Colleges

AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

Association of Anatomy, Cell Biology and Neurobiology Chairpersons
Association of Independent Research Institutes
Association of Medical & Graduate Departments of Biochemistry
Association of Medical School Microbiology and Immunology Chairs
Association of Medical School Pediatric Department Chairmen
Association of Pathology Chairs
Association of Professors of Dermatology
Association of Professors of Medicine
Association of Schools and Colleges of Optometry
Association of Schools of Public Health
Association of Subspecialty Professors
Association of Teachers of Preventive Medicine
Association of University Environmental Health Sciences Centers
Association of University Professors of Ophthalmology
Association of University Programs in Occupational Health and Safety
Association of University Radiologists
Biophysical Society
Cancer Research Foundation of America
Central Society for Clinical Research
Coalition for American Trauma Care
College on Problems of Drug Dependence
Consortium of Social Science Associations
Cooley's Anemia Foundation
Council of Community Blood Centers
Cystic Fibrosis Foundation
Dystrophic Epidermolysis Bullosa Research Association of America
The Endocrine Society
FACT: Families Against Cancer
Federation of American Societies for Experimental Biology
Federation of Behavioral, Psychological and Cognitive Sciences
Foundation for Ichthyosis & Related Skin Types (F.I.R.S.T.)
Gay Men's Health Crisis
General Clinical Research Centers Program Directors Association
Genetics Society of America
Human Rights Campaign Fund
Institute of Electrical & Electronics Engineers--United States Activities (IEEE-USA)
Joint Council on Allergy, Asthma & Immunology
Juvenile Diabetes Foundation International
Leukemia Society of America
Life and Health Insurance Medical Research Fund
National Alopecia Areata Foundation
National Association for the Advancement of Orthotics & Prosthetics

AD HOC GROUP FOR MEDICAL RESEARCH FUNDING

National Association for Biomedical Research
National Association of Children's Hospitals
National Association of Physicians for the Environment
National Association of State Universities and Land-Grant Colleges
National Campaign to End Neurological Disorders
National Caucus of Basic Biomedical Science Chairs
National Coalition for Cancer Research
National Committee to Preserve Social Security and Medicare
National Council on Spinal Cord Injury
National Foundation for Ectodermal Dysplasias
National Health Council
National Marfan Foundation
National Multiple Sclerosis Society
National Organization for Rare Disorders (NORD)
National Osteoporosis Foundation
National Perinatal Association
National Psoriasis Foundation
Oncology Nursing Society
Osteogenesis Imperfecta Foundation
Paget Foundation
Paralyzed Veterans of America
PXE International, Inc.
Family of Christopher Reeve
Renal Physicians' Association
Research!America
Resolve, Inc.
Society for Academic Emergency Medicine
Society for the Advancement of Women's Health Research
Society for Inherited Metabolic Diseases
Society for Investigative Dermatology
Society for Neuroscience
Society for Pediatric Research
Society of Critical Care Medicine
Society of Medical College Directors of Continuing Medical Education
Society of Toxicology
Society of University Surgeons
Society of University Urologists
Tourette Syndrome Association, Inc.
United Scleroderma Foundation, Inc.